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Automotive Daily News

★CARS★ SHOP EQUIPMENT TRUCKS ★★AVIATION★★ PARTS ACCESSORIES ★TIRES★

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PRODUCTION IN SEPTEMBER 230,888

New York State Dealers Opposed to Promiscuous Introduction of New Cars

Convention at Syracuse Calls on Manufacturers to Discontinue the Practice; Favors State Inspection

SYRACUSE, N. Y., Oct. 20.—Members of the Empire State Automobile Merchants Association have returned to their homes after a successful convention here, at which nearly five hundred delegates were present. Officers were elected for the next year and several important resolutions were adopted.

Among the resolutions adopted by the meeting was one condemning the practice of manufacturers in placing new models of passenger cars on the market in the summer and fall months.

Dr. R. H. Forbes of Olean was

(Continued on Page 4)

BIG BUS DEAL LINKS FOUR SOUTHERN LINES

Nashville, Tenn, Oct. 20 (UTPS).—Plans for a $5,000,000 merger of four major bus lines and a number of smaller lines into one operating company, which will become the largest bus company in the world, became known here today.

The merger will include the Pickwick-Greyhound Lines of the South, the Greyhound Lines of Georgia, Union Transfer Company of Tennessee and the Smith Motor Coach Company of Memphis, it is said.

The report connects the name of Frederick Smith, president of the Smith Motor Coach Company, as president of the newly-formed corporation. However, he refused to comment on the reported merger or the connection of his name with the presidency of the new company. He said he could neither deny nor confirm them.

According to the reports, the general offices of the new bus corporation will be located in Nashville, with important headquarters maintained in both Memphis and Atlanta. Plans have already been

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RUSH TO BUY CARS AT OLYMPIA SHOW PROVES BIG SURPRISE

London, Oct. 20.—There has been an unprecedented rush to buy new motor cars this year at the Olympia Motor Show, which opened on October 17. The heavy volume of orders on the opening day actually bewildered the manufacturers with displays on hand.

The question is now being asked whether this buying heralds the end of the economic depression. Those inclined to answer in the affirmative point to the fact that the automotive industry usually leads in economic recovery to bolster their argument.

The show indicates clearly that the sports car, as a type, has greatly influenced the British coach builder. Many of the former designs, such as the landaulet, once a great favorite, have practically disappeared, and generally speaking, the

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9 MONTHS TOTAL 3,066,513; SEASONAL DROP ONLY 3%

Final Figures Exceed Previous Estimate by National Automobile Chamber of Commerce by 4,000

By FRANCIS P. DAILY

WASHINGTON, Oct. 20.—Production of passenger cars and trucks in the United States and Canada during September totaled 230,888 units, while the output for the first nine months of this year was 3,066,513, it was disclosed today by the Department of Commerce.

Estimates by the National Automobile Chamber of Commerce had placed September production at 226,361 cars and trucks and the first nine months' production at 3,061,983. The total for September was 47 per cent. below that for the same month of last year, when 429,729 units were manufactured, and was 40 per cent. below the five-year average (1925-1929) for September. The decline was but 3 per cent. under August.

An analysis of the department's figures shows that the first nine months' output was 37 per cent. under the same period of last year, but only 18 per cent. under the five-year average for the period.

Passenger car production in the United States in September was 180,547, or less than 7,000 units under August, but far exceeded each of the last two months of 1929.

On the other hand, United States truck production in August showed a strong upward swing with 41,975 units, as against 35,760 in August and 39,664 in July, even when figures for factory-built taxicabs were included with trucks for these earlier two months.

A study of the figures shows that truck manufacture for the January-September period of this year was maintained consistently each month, although the total for the nine-month period, 437,420, compared with 634,739 for the same period of last year.

Canadian production of cars and

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COMMERCIAL BODY BUILDERS GROUP MEETS IN ST. LOUIS

St. Louis, Mo., Oct. 20 (UTPS).—The National Commercial Body and Equipment Association, the biggest and most progressive organization in the automotive truck and equipment industry in the United States, held its second meeting at the New Hotel Jefferson in St. Louis last week.

Seventeen nationally known body building concerns of the commercial field were represented. Representatives of fourteen associate auxiliary members, such as the various equipment companies, were present.

The following states were represented: Arkansas, Texas, Colorado, Illinois, Tennessee, Nebraska, Ohio, New York and Missouri. A number of commercial body builders located in the Northern and Eastern States who were not represented in person at the convention telegraphed their interest and willingness to become members of the association and enter into its work.

The National Commercial Body and Equipment Asociation is the outgrowth of the Allied Commercial Body Manufacturers' Association. The decision to change the name of the association was reached because

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PURCHASE OF MARTIN-PARRY PLANT MARKS REAL CHANGE IN POLICY BY CHEVROLET

By CHRIS SINSABAUGH

DETROIT, Oct. 20.—Of the several major happenings in a news way in the Detroit area last week, possibly the purchase of the Martin-Parry body plant in Indianapolis by the Chevrolet Motor Company was the most important. It marks a decided change in policy on the part of Chevrolet, and this decision will affect a number of big body building concerns in all parts of the country.

Up to now Chevrolet has not built any truck bodies—it has sold only the truck chassis. This left the body field open to a couple of hundred concerns which build bodies but not chasis. After a Chevrolet chassis was sold it was necessary to make the body selections from the stocks of outside concerns. Ford experienced this, too, and several years ago he took to truck body-building himself so that he could offer the complete vehicle to his customers.

Chevrolet, however, is not going to build all its own bodies now, it is said. The Indianapolis plant will turn out only a certain percentage of bodies needed by Chevrolet and Chevrolet also will operate the

(Continued on Page 2)

G. M. 1930 Dividend Safe; Retail Sales Top Output

NEW YORK, Oct. 20.—The recent announcement by Alfred P. Sloan, president of General Motors that his organization would probably declare its regular dividend for the third quarter of 1930 has aroused much interest here. Rumors had been flying about to the effect that the dividend of $3 per annum would be reduced to $2.

As a matter of fact there is no question at all that General Motors will earn its regular dividend on the year's operation. In the first six months the corporation showed earnings of $2.32 per share. In the third quarter earnings of from 50 to 55 cents are indicated, while the last quarter will show earnings of from 30 to 35 cents. If we place the earnings for the last half year at about 85 cents per share, the year's operations would show a profit of $3.17, safely over the dividend requirements.

Definite announcement has just been made of the September sales figures for General Motors. The outstanding fact disclosed by these figures is that sales to consumers are again heavier than sales to dealers. A total of 75,805 General Motors vehicle units were sold to consumers, while factory sales to dealers totaled 69,901 units. This trend to reduction of dealer inventories has been characteristic of General Motors operations during the past months. The announcement in detail follows:

Sales of General Motors Corporation to dealers during September, including Canadian sales and overseas shipments, totaled 78,792, against 85,610 in August and 146,483 in September, 1929. During the first

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Hearings on Motor Bus To Influence Legislation

Special from A. D. N. Washington Bureau

WASHINGTON, Oct. 20.—The new investigation ordered by the Interstate Commerce Commission into the matter of motor bus lines in competition with the railroads is expected to have a far-reaching effect upon any proposed legislation at the coming short session of Congress.

Hearings will be held in seventeen cities, beginning November 17 and ending March 4. The short session of Congress begins December 8 and adjourns March 4.

Today it was considered problematical whether the hearings will affect legislative action or whether the sponsors of the Parker bus bill will attempt to get the measure up at the coming short session.

The bill, as passed by the House last spring, was emasculated in the Senate, recommitted to the committee on interstate and foreign commerce, again brought before the Senate and finally allowed to slumber in the legislative jam at adjournment.

Senator James Couzens of Michigan, who was in charge of the measure in the upper House, charged that the railroad interests, which frankly admitted their desire for bus regulation, gave up their fight when the so-called "teeth" in the bill, which would have shut out new bus lines, were extracted by numerous amendments.

On the other hand, the National Association of Bus Operators, feels that some sort of motor bus regu-

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COMPARATIVE AUTOMOBILE PRODUCTION BY MONTHS OVER FOUR-YEAR PERIOD

	1930	1929	1928	1927
January	285,762	422,538	240,191	254,284
February	362,488	497,705	336,300	323,390
March	422,043	626,076	430,783	417,763
1st quarter	1,070,293	1,546,319	1,007,274	995,437
April	467,295	663,811	434,315	430,993
May	442,078	636,250	459,725	431,356
June	350,567	567,424	425,195	343,025
2d quarter	1,259,940	1,867,485	1,319,235	1,205,374
Six months	2,330,233	3,413,804	2,326,509	2,200,811
July	272,552	518,301	417,312	280,383
August	232,840	512,842	492,543	322,520
September	230,888	429,729	436,507	271,572
3d quarter	736,280	1,460,872	1,346,362	874,475
Nine months	3,066,513	4,874,676	3,672,871	3,075,286

Production in September 230,888; Exceeds Estimate

(Continued from Page 1)

trucks in September totaled 7,957 units, as compared with 9,792 in the previous month and 13,817 in September, 1929.

While the passenger car output dropped from 6,946 units in August to 5,623 last month, truck manufacture was only slightly less than in August and far in excess of July. The average for the year was well maintained and corresponds to the trend in the United States.

The following table is based on reports received by the Department of Commerce from 144 manufacturers in the United States, 42 making passenger cars and 113 making trucks (11 making both types of vehicles), while the Canadian figures were furnished by the Dominion Bureau of Statistics:

UNITED STATES

1929	Total	Passenger Cars	Trucks	*Taxicabs
January	401,037	345,545	53,428	2,064
February	466,418	404,063	60,247	2,108
March	585,455	511,577	71,799	2,079
April	621,910	535,878	84,346	1,686
May	604,691	514,863	88,510	1,318
June	545,932	451,371	93,183	1,378
July	500,840	424,944	74,842	1,054
August	498,628	440,780	56,808	1,040
September	415,912	363,471	51,576	865
Total (nine months)	4,640,823	3,992,492	634,739	13,592
October	380,017	318,462	60,687	868
November	217,573	167,846	48,681	1,646
December	120,007	91,011	27,513	1,483
Total (year)	5,358,420	4,569,811	771,620	17,589
1930				
January	275,374	236,145	38,657	572
February	346,940	296,461	49,457	1,022
March	401,313	335,720	64,204	1,389
April	443,638	374,913	67,560	565
May	417,406	362,522	54,370	514
June	335,477	289,245	45,773	459
July	†262,364	222,459	†39,664	241
August	†223,048	187,637	†35,760	251
September	222,931	180,547	41,975	409
Total (nine months)	2,927,291	2,485,049	437,420	5,422

1929	Canada Total	Pasenger Cars	Trucks
January	21,501	17,164	4,337
February	31,287	25,584	5,703
March	40,621	32,833	7,788
April	41,901	34,392	7,509
May	31,559	25,129	6,430
June	21,492	16,511	4,981
July	17,461	13,600	3,861
August	14,214	11,037	3,177
September	13,817	10,710	3,107
Total (9 m.)	233,853	186,960	46,893
October	14,523	8,975	5,548
November	9,424	7,137	2,287
December	5,495	4,426	1,069
Total (year)	263,295	207,498	55,797
1930:			
January	10,388	8,856	1,532
February	15,548	13,021	2,527
March	20,730	17,165	3,565
April	24,257	20,872	3,385
May	24,672	21,251	3,421
June	15,090	12,194	2,896
July	10,188	8,556	1,632
August	9,792	6,946	2,846
September	7,957	5,623	2,334
Total (9 m.)	138,622	114,484	24,138

*Includes only factory built taxicabs and not private pasenger cars converted into vehicles for hire.
†Revised.

HEXCEL
Correct in design. Flawless in workmanship. Satisfactory in service. Deliveries on schedule.
HEXCEL RADIATOR CO.
MILWAUKEE, WIS.
RADIATORS

LINK-BELT TO IMPROVE PLANT AT INDIANAPOLIS

Indianapolis, Oct. 20.—Having recently completed a new factory at Toronto, Can., as well as an entirely new plant to house their Pacific division at San Francisco, the Link-Belt Company now announces another improvement for the Indianapolis foundry.

A contract for a powdered coal system entailing an expenditure of $125,000 has just been closed. This contract covers the installation of a system at this plant, where Link-Belt chains for elevating and conveying are made. A building to house the system and alterations in the plant will be included in the improvements.

HEARINGS ON MOTOR BUS OPERATIONS SET

(Continued from Page 1)

latory legislation is better than none at all, and is willing to go through with the Parker bill. With this object in view, there is reason to believe that some pressure may be exerted on Senator Couzens to resurrect the measure.

However, it is doubtful if the Senate committee will hold hearings, in view of the mass of testimony that was given before the House Committee on Interstate and Foreign Commerce, as well as the previous data furnished by the I. C. C. as the result of its earlier series of hearings.

It is the purpose of the commission to gather evidence to supplement data it previously obtained during a protracted investigation of all-bus highways operations, including freight carriers, which was completed two years ago. However, it is a foregone conclusion that the new data will not be finished and subsequent recommendations drafted until probably next spring or midsummer, several months after Congress has adjourned.

The order for the new inquiry by the I. C. C. states that hearings "will be confined primarily to the matter of co-ordination between common carriers subject to the transportation act and common carriers by motor."

The dates and places announced by the commission are as follows:—St. Louis, November 17; Kansas City, 21st; Dallas, 28th; New Orleans, December 3; Atlanta, 8th; Detroit, 11th; Boston, 15th; New York, 18th; Chicago, January 5; St. Paul, 12th; Seattle, 19th; Portland, Ore., 22d; San Francisco, 27th; Los Angeles, February 2; Denver, 9th; Omaha, 14th, and Washington, March 4.

REEVES FINDS GOOD FEELING IN DETROIT

(Continued from Page 1)

twenty-one branches of the Indianapolis purchase.

Indianapolis will benefit greatly, for Chevrolet has already started operations with a force of 600 workmen, with J. A. Jamieson, Chevrolet controller, as general manager of the new division.

Oakland-Pontiac and Olds are the third and fourth General motors units to have their personnel shifted in the past month. Cadillac having been affected by the resignation of Lynn McNaughton, which resulted in J. C. Chick being moved from Chevrolet to the sales managership at Cadillac. Chick's promotion brought about changes in personnel in Chevrolet.

The latest changes came last week when I. J. Reuter, president of the Olds Motor Works, was sent to Lansing, to become general manager of Oakland-Pontiac in place of A. R. Glancy, who was transferred to General Motor's general staff. No successor at Lansing has been named, but it is expected that D. S. Eddins, now general manager, will be stepped up at the proper time. Mr. Reuter, although bearing the title of president of Olds, had been inactive for some time because of having been assigned to the general managership of the German Opel, taken over by General Motors. In getting Mr. Reuter Oakland-Pontiac has a production man whose equal is hard to find in the automotive field.

Alfred Reeves, general manager of the National Automobile Chamber of Commerce, visited Detroit Friday, the last stop on his swing around the circle of factories. He returned to New York that night.

Reeves was feeling good. He had contacted with most of his members and he thinks that a better spirit prevails on all sides.

"I found the factories on their toes," said the N. A. C. C. general manager. "All are looking ahead to the national shows as the time when the formal assault on 1931 begins. New models are being put through, sales staffs are being drilled and big plans made for next year.

"Our members are not overlooking possible business the remaining weeks of the year, though. They are after all business in sight, and they expect considerable. Of course, though, buyers are expecting concessions and low prices at this point in the depression we have gone through, just as they do in purchases other than automobiles. But no stone is being left unturned to get that business."

Hupmobile's nationalized sky parade and driveaway announced last week for October 29-30 is attracting considerable attention. Hupp hopes to have 500 of its straight eights driven home from Detroit by distributors, dealers and customers, who will come here for the purpose of taking delivery direct at the factory.

More than a dozen trimotored planes will bring the visitors here and Hupp believes that the demonstration will go a long way in bringing about a business revival.

SPARKS *from* DETROIT

* * *

Reuter's Record

* * *

Best True Story

* * *

Chris Sinsabaugh—Detroit Editor

"THE oldest man for his years" in the automobile industry as applied to I. J. Reuter, the new Oakland-Pontiac general manager, may sound like an Irish bull. Maybe it is, but figure for yourself. For two-thirds of his life—ever since he was a 15-year-old schoolboy (and he now is 45)—he has been actively identified with automobile manufacturing, so perhaps "the oldest man for his years" applies in this case.

Few there are who can equal the service stripes of this new Oakland-Pontiac chief, who, as an Indianapolis high-school boy, divided his time by studying in school and working as an experimental mechanic for Marion and Premier, both well known makes two decades back, earning an engineer's degree at Purdue, then plunging back into the industry with Overland, then made in Indianapolis.

Mr. Reuter moves from Lansing to Pontiac and takes with him a reputation as a production man that will stand comparison with any in the industry. He is a most democratic executive, a man who delights to roam through the plant, chatting with the workmen and looking over their work and "fanning" with them. He talks their language, and the workmen know his production knowledge is not just book learning; it has been gained by practical experience. They feel he knows their problems and is in sympathy with them.

Engineers, too, find in him a fellow engineer who, when there comes a difference in opinion, is broadminded enough to not insist his way is the right way. He does not force his opinions; he tries out the various ideas, then selects the best.

* * *

WHEN Mr. Reuter went to Lansing, in 1925, Oldsmobile was not the lusty unit of General Motors it now is. Production was low and the plant needed rehabilitation. In the four years of his activity there (the past year, although he still retained the title of president, he has been inactive because of his being assigned to handling the G. M.'s Opel plant purchase in Germany) he has increased Oldsmobile production two and one-half times over what it was when he went there.

Rehabilitating the factory, he has increased its capacity 150 to 200 cars a day, and leaves almost a new plant behind him. Under him there was built a new eight-cylinder motor plant, a tool-design building, an axle plant, engineering laboratories, administration building, a new service and parts building which is a model of its kind, two huge shipping warehouses, a heat-treat plant and a sheet metal plant. Surely that is a record of which any administrating executive might well be proud.

* * *

HERE'S one the Detroit News tells in its editorial paragraphs: "The best story (true) from the Boston convention, to our mind, is one about a Western Legionnaire who spirited an Austin aboard a freight elevator and drove it around a sixth-floor hotel corridor all night."

* * *

ONE of the first practical suggestions made by Sidney Waldon, the former Packard and Cadillac executive, since he became a member of Detroit's Street Railway Commission, is that the street car tracks be placed nearer the curb on the 120 foot streets. He favors three lanes, the first for parking, the second for loading the street cars, and the third in the center left open for through traffic. A study of the idea will be made.

* * *

UNDER the new ordinance, Detroit motorists can travel the city streets up to thirty miles an hour, but over that the police must arrest and leave it up to the judge to decide if the speed was safe and prudent under the existing conditions. The new ordinance coincides with the state law as to speed.

Cumulative New Commercial Car Registration Statistics, September, 1930

Returns for today: Maryland, North Carolina, South Dakota and West Virginia

States	Autocar	Brockway-Indiana	Chevrolet	Diamond-T	Dodge	Essex	Fargo	Federal	Ford	G. M. C.	International	Mack	Paige	Relay	Reo	Republic	Rugby	Sterling	Stewart	Studebaker	Whippet	White	Willys	Willys-Knight	Miscellaneous	Totals	States
Arkansas			103		7				122		16				1							1			2	252	Arkansas
Delaware	4		25		1		1		48	1	4								1							85	Delaware
Florida			140		4		1	7	295		8	3			2						1		3		2	466	Florida
Illinois	13	3	497	39	43		4	5	714	15	93	10	2	1	12	1	3	7	1		5	20	5	2	39	1534	Illinois
Maryland	5	4	113	8	14			4	223	17	19	10			13	3		1	4	3	1	11			5	458	Maryland
Montana			69		7		3		108	1	43	1			1		3			1		1	1		1	240	Montana
N. Carolina			214	1	12				277	7	13	1			1							2	3		10	541	Nor. Car.
N. Dakota			148	1	8		2		153	3	95				3		1			3		1	4		2	424	N. Dak.
S. Carolina			128		3			1	179		3	4			3		1								3	325	S. Car.
S. Dakota		1	80	2	6	1	2	1	119	1	54				4		1			1			1		1	275	S. Dak.
Utah			91		5				149	13	13	2	1		5		3			2		3	1		6	294	Utah
W. Virginia			113		16	1		1	163	10	26		1	1	6		1				1	2	3		5	350	West Va.
Wisconsin			266	14	15	1		3	402	9	50	1		3	8			4	2	1	2	1	8		9	799	Wisconsin
Dist. of Col.	4	1	34	6	6		1	2	114	4	7	8				2	1				1	4				195	D. of C.
Totals	26	9	2021	71	147	3	14	24	3066	81	444	40	4	5	59	6	14	12	8	11	11	46	29	2	85	6238	Totals
Ark., 1929		2	296		12		7		232	4	43	3		2	2		1			1	15	4			2	626	Ark., '29
Del., 1929	1		42		2			1	42	3	5	3							1		2	1				103	Del., 1929
Fla., 1929		4	141		17		1	1	237	4	17	7			7					2	1	5				444	Fla., 1929
Illinois, '29	10	5	590	51	127	2	16	12	916	20	165	8			53	1		2	1		41	18			106	2144	Ill., 1929
Md., 1929	17	12	171	13	38	1	6	6	233	16	38	18			21	2		12	6		7	32			10	659	Md., 1929
Mont., 1929			156		20		9	1	203	6	68				5	1	3			1	20	5				498	Mont., '29
N. C., 1929			395		40	2	8	1	476	17	42	7			3	3	2				13	9		1	20	1039	N. C., '29
N. D., 1929			288	2	27		9	1	285	16	165				3		2				15	1		1		815	N. D., '29
S. C., 1929			210		13		4	2	187	8	13	1			1		1			1	3	6				450	S. C., 1929
S. D., 1929			153	1	12		4		117	4	101	1			12		2			3	16				1	427	S. D., '29
Utah, '29			98		12		2		214	8	14	1			8		8			2	3	1			1	372	Utah, '29
W. Va., '29		6	155	1	42	1	7	3	155	17	30			1	14	3	1				9	1			5	451	W. V., '29
Wis., 1929	1		299	14	34	1	9	5	373	20	60			3	21		1	2	3	1	28	4		1	16	896	Wis., '29
D. of C., '29		1	32	2	3	1			121	12	2	1			4				5		1	5			2	192	D. C., '29
Totals	29	30	3026	84	399	8	82	33	3791	155	763	50	*	6	154	10	21	16	16	11	174	92	*	3	163	9116	Totals

*Not in production at that time.

OBTAINS SERVICE JOBS THROUGH UNIQUE DIRECT MAIL PUBLICITY

Botterill's Shop in Denver Provides Owners of Hudson-Essex Cars With License Holders; Gets Message Across in Advertising That Is Read

By IRA R. ALEXANDER

TOM BOTTERILL, INC., Hudson and Essex distributor at Denver, Col., recently sent through the mails in Denver a piece of direct mail publicity that was a very good example of what is well worth while in this kind of advertising.

This piece of direct mail received notice from those receiving it due to the fact that it was off the beaten path.

The letter was sent to all Hudson and Essex owners in Denver and read as follows:

"In case of an accident, the first thing the gentleman in the blue coat asks for is your license card. After you have hunted for it, and finally remembered you left it home on the piano, he inquires with deceptive gentleness for your brake test card.

"The implication is, of course, that you probably stole the car you're driving and you'll be lucky if you get off with fifty years at hard labor.

"We have no desire to see Hudson-Essex owners in any such plight. Consequently we are sending you a little envelope in which you can place your license card, your brake test card and the enclosed Botterill emergency service card. We suggest that you put these cards in a pocket of your car, and tell every member of the family where they are and what they are. Then the driver will have them if the unexpected should happen.

"If you should need repair or towing service, call Botterill's immediately. Phoning Keystone 5231 on business days, or Keystone 2969 on Sundays, nights, or holidays, will bring service in a hurry. Your car will be brought here and protected awaiting your own orders. We will make a thorough check of damages, make such repairs as are ordered, using not only genuine Hudson or Essex parts, but also expert mechanics trained to service these two makes of cars."

The envelope accompanying the letter, made of red paper, is just large enough to hold the three cards mentioned. The Botterill service card, a green color and printed on heavy cardboard, read in part:—

"Important! Should your car need any repairs, through accident or otherwise, you will get the most satisfactory and economical service through Tom Botterill's service department. All work is absolutely guaranteed; expert Hudson-Essex mechanics do the job, and only genuine Hudson or Essex parts are used."

A person opening the letter and seeing the bright red envelope at once wanted to know what was in the envelope and what it was all about. So he read the letter and examined the contents of the envelope. The Botterill firm does considerable direct mail advertising and has found it worth while. The firm has a large mailing list and sees to it that it is kept up to the minute.

18 MAKES, CARS, TRUCKS, AT ANNUAL DALLAS SHOW

Dallas, Tex., Oct. 20.—Eighteen different makes of automobiles and trucks are shown in the elaborate display of passenger cars, trucks, airplanes, automotive equipment, spare parts and accessories and radio equipment shown at the annual automobile show in progress here.

The committee includes Ray Shelton, chairman; E. Gordon Perry, vice-chairman; H. B. Ransom, F. A. Ferris, C. S. Hamilton and B. B. Owen. The latter is president of the Dallas Automotive Trades Association. J. H. Connell is executive secretary.

Dallas Shop Completes 5,000 Jobs First Year Of Chevrolet Servicing

Dallas, Tex., Oct. 20.—Although only one year old, the Checkers-Clayton Chevrolet Service Company of this city has the distinction of having filled more than 5,000 service orders during the first twelve months, gaining rating as one of the best equipped Chevrolet service stations in the country.

The business was founded October 1, 1929, by M. L. (Checkers) Clayton, who, as an experienced automotive engineer, appreciated the necessity of having first-class mechanics do all automotive repair work. Accordingly, he employed five of the best automobile mechanics available, all of whom had had special training in Chevrolet overhauling, repair work and servicing.

Mr. Clayton's previous experience as general manager, superintendent, experimental engineer and service manager for several large automobile companies enables him to give more than ordinary service. He is a member of the Society of Automotive Engineers, and thoroughly versed in automotive design and construction.

CHARLOTTE, N. C., DEALERS REPORT INCREASED SALES OF NEW AND USED TRUCKS

Charlotte, N. C., Oct. 20.—A gradual increase in the truck business of this city has been decidedly noticeable, according to the leading trucking concerns' statements. Although the used trucks have been holding a larger part of the sales, the managers predict a larger sale of new trucks in the next two months.

R. E. Johnston, district manager of the White Company, dealer and distributor for White trucks in this section, states business is very satisfactory and sales of heavy-duty trucks and trailers exceptionally good. "Business in dollars and cents exceeds last year, but number of units sold is smaller, owing to the fact that most of the sales are of higher-priced makes," Mr. Johnston said. "We look forward to a continuation of good business and look for a sizable increase until first of the year."

The Autocar Sales and Service Company of West Morehead Street, which has recently moved from its old location on South Church Street, has been showing little increase in sales of new trucks during the past few months, but sales of used trucks have been so favorable that at present all have been sold out. W. W. Tennant, sales manager, shows a successful year for the Autocar Sales and Service Company, although the truck business for the past few months has not been up to last year's quota.

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS

"WE are enthusiastic over the Improved Whippet. We have never had a new model on which we have received so many favorable comments."

—Swartzell & Way
Michigan City, Ind.

Write or wire for franchise details

WILLYS-OVERLAND, Inc.
TOLEDO, OHIO

WILLYS-OVERLAND, LTD., TORONTO, CANADA

Automotive Daily News

"Of, By and For the Entire Automotive Industry"

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ADVERTISING AND BUSINESS HEADQUARTERS

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George M. Slocum, Manager Detroit Bureau, 427-8 Fisher Building, Detroit, Mich., phone Empire 3500; Willard R. Cotton, Western Manager, 333 North Michigan Ave., Chicago, Ill., phone Central 5936; Metz B. Hayes, New England Manager, Little Building, Boston, Mass.; Blanchard, Nichols & Coleman, American National Bank Building, San Francisco, Cal.; Lincoln Building, Los Angeles, Cal.; 1037 Henry Building, Seattle, Wash. Address ALL advertising and business correspondence to 2716 Graybar Building, New York City.

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Rock Bottom

IN any business depression, the beginning of the upturn is always heralded by rock bottom prices. It is a human characteristic to try and wait to buy at the very lowest price that can be obtained. Guessing what price or prices are rock bottom is the reason for hesitations in business, of which we have lately seen a number. This condition is particularly evident in the securities market. Several times buyers of securities have believed that prices were at the bottom that could be hoped for and have begun investing. But each time the market has fallen off again.

The same condition holds in markets for various products. Buyers are hesitating to make comprehensive purchases or commitments because the feeling remains that prices may drop to new lows.

How long this condition of tentative buying will continue is hard to say. Sooner or later the idea is going to become prevalent that prices actually have reached rock bottom. When this occurs buying will begin on a serious basis and the actual revival of business will become apparent to all.

The present condition of timidity and uncertainty is extremely discouraging, but it invariably precedes revival in any business recession. The public mind cannot shake off its fear of some unnamed disaster and people will not commit themselves to making purchases of any comprehensive character. The minute they realize that present prices make buying a positive investment, out will come savings, buying will increase and business will hold up its head again.

The Power of Advertising

IN the current issue of Trends and Indications, the interesting house organ published by Dorrence, Sullivan & Co., George H. Wilcox, chairman of the board of International Silver, has some pertinent remarks to make on the power exerted by advertising in modern life.

"Advertising for its present-day effectiveness," says Mr. Wilcox, "has, of course, been greatly helped by present-day facilities for overcoming time and distance. It is easy to visualize the intensity of this great business building force if we try to imagine what would have been the effect on the progress of the world at any given time if advertising, with its modern effectiveness and geared to the speed of today, could have been dropped into the life of that age. Surely it would have lopped off centuries of ignorance and inertia and speeded up all the slow moving factors of progress."

When we come to fit into the mosaic of modern life all the contributing factors that make it what it is, we realize how tremendous a role advertising plays in making possible the living conditions of today. Mass production would be impossible without modern advertising to create purchasers for the products that pour from our industries. Whether modern advertising created mass production or mass production brought forth modern advertising, is much like the old question of "which came first, the chicken or the egg." But one thing is certain, neither side of the equation could exist without the other.

American advertisers have done very well during the present business recession. The total volume of advertising has decreased, no doubt, but the leading companies have shown their understanding of the power of the appeal to the public by holding up schedules at the highest possible level. Incidentally, now that the upturn impends, the power of advertising is going to be the deciding factor in promoting revival of business.

NEW YORK DEALERS OPPOSE INTRODUCING NEW SUMMER MODELS

(Continued from Page 1)

elected president, succeeding E. D. Deane of Binghamton. Joseph F. Haas of Brooklyn was re-elected a first vice-president, while Q. H. Ball of Rochester was named second vice-president. S. Earle Ackerman of Syracuse was continued as secretary and W. W. Gababrant of Utica was again chosen treasurer. Lewis G. Stapley of Albany was again named manager.

Directors elected for a term of three years were Dr. Forbes, J. E. Hansen of Rochester, Lee J. Eastman of New York city, H. W. Kellogg of Niagara Falls and John Kovacs of Schenectady. Dr. Forbes and Mr. Hansen were re-elected.

Another resolution adopted by the association called for the appointing of a special committee to draft a bill favoring compulsory inspection of automobiles by the state. This bill will be presented to the state Legisature at its next session. Under the terms of the bill proposed by the dealers a person could not register a vehicle without presenting a certificate of inspection.

It was decided to hold the 1931 convention at Albany on October 14 and 15.

Following is the complete text of the resolution attacking the practice of introducing new models in the fall and summer:

"Whereas, the practice of placing new models of automobiles on the market at frequent periods throughout the year, more especially during the summer and early fall months, is highly detrimental to the automobile industry, disorganizing the market for retailers, distributors and retail buyers;

"The knowledge that new models are to appear is broadcast for months before their appearance and the public defers purchases which normally would be made in the spring or early summer months, thus slowing up the market at the best selling season;

"The used car evil is aggravated by the frequent changes in models, as it results in fluctuating trade-in prices. With new models announced to appear in July, the majority of dealers on sales made after May 1 are obliged to make such sales at clean-up prices, either in trades or discounts. Merchandise is thus discounted in the best sales months;

"At whatever time changes are made there is a reaction in anticipation of these changes for some months before the new models appear. November and December being dull months, less harm would result if changes were anticipated in these months. In many instances the frequent announcements and anticipation of changes have carried the buyers along to a point where they defer their purchases until the following spring;

"The placing of new models on the market in December and January is favored by the bankers and finance companies in New York. In years past when models were gotten out at that time, it facilitated the dealer liquidating his obligations with bankers once a year. It was usually done in the fall, and at the same time arrangements were made for a new line of credit during the ensuing year. With frequent models, this plan is impossible;

"The automobile shows are an important factor in the industry. It is obvious that the attendance at these shows is reduced if the cars shown have been on the market for months. The incentive to attend and see new models is removed. This was clearly shown in the 1929 automobile shows;

The automobile factories are affected by frequent model changes throughout the year. Winter is the dead sales season. It would appear to be the time for changes, inventories, for speeding up production, reaching the peak shortly after the beginning of the selling season, when cars are needed by the dealers and can be delivered without excessive storage charges. New models in the selling season, plus slow delivery, bring the peak of production at the low selling periods, adding to the dealer's storage interest, insurance and tax charges;

"Whereas for these and other reasons which might be cited, it appears obvious that the most profitable time for all concerned to place new models on the market would be in the months of December and early in January, as was the practice unti l recent years; therefore be it

"Resolved, That the Empire State Automobile Merchants' Association, Inc., hereby submit these facts for the consideration of the manufacturers, with a view to impressing them with the thought that changes in models throughout the year are detrimental to the industry as a whole, and with a further view to stressing the importance of bringing out new models in December and January before the automobile shows."

G. M. 1930 Dividend Safe; Retail Sales Top Output

(Continued from Page 1)

nine months of 1930 total sales to dealers were 1,008,597, compared with 1,675,964 in the like period of last year.

Domestic sales to dealers in September were 69,901, against 76,140 in the preceding month and 127,220 in September, 1929. Domestic sales to dealers during the first nine months were 896,329, compared with 1,361,066 in the like period of last year.

September domestic sales to consumers were 75,805, against 86,426 in August and 124,723 in September of last year. Domestic sales to consumers in the first nine months were 900,207, against 1,271,275 in the like period of 1929.

Domestic sales to dealers and consumers during the first nine months of 1930 and 1929 are compared in the following table:—

	Sales to Consumers— 1930.	1929.	—Sales to Dealers, 1930.	1929.
January	74,167	73,989	94,458	95,441
February	88,742	110,148	110,904	141,222
March	123,781	166,942	118,081	176,510
April	142,004	173,201	132,365	176,634
May	131,817	169,034	136,169	175,873
June	97,318	154,437	87,595	163,704
July	80,147	147,079	70,716	157,111
August	86,426	151,722	76,140	147,351
September	75,805	124,723	69,901	127,220
Nine months	900,207	1,271,275	896,329	1,361,066

Monthly sales to dealers, including Canadian and overseas sales, are compared for the last five years in the folowing table:—

	1930	1929	1928	1927	1926
January	106,509	127,580	125,181	99,367	76,332
February	126,196	175,148	169,232	124,426	91,913
March	135,930	220,391	197,821	161,910	113,341
April	150,661	227,718	197,597	169,067	122,742
May	147,483	320,277	207,325	173,182	120,979
June	97,440	200,754	186,160	155,525	111,380
July	79,976	189,428	159,473	136,909	87,643
August	85,610	168,185	186,653	155,604	134,231
September	78,792	146,483	167,460	140,607	138,360
October	....	122,104	120,876	128,459	115,848
November	....	60,977	47,587	57,621	78,550
December	....	40,222	35,441	60,071	44,130
Total	1,008,597	1,899,267	1,810,865	1,562,748	1,235,449

Assurances that General Motors Corporation would declare the regular quarterly dividend of 75 cents on the common stock at the next meeting to be held around the middle of November were contained in a statement made by Alfred P. Sloan, Jr., president, to a representative of Dow, Jones & Co.

Having his attention called to the rumors circulated in the financial district, Mr. Sloan dismissed these reports, saying: "There is no basis for concern over the safety of the General Motors common dividend. There has been no discussion within the corporation concerning the dividend, and no reason for such discussion in advance of the directors' meeting. Speaking for myself and associates in the management, we are confident that the regular dividend will be declared in November."

RUSH TO BUY CARS AT OLYMPIA SHOW PROVES BIG SURPRISE

(Continued from Page 1)

automobiles on display show much more modern lines.

The trend for brighter colors continues and the exhibit is full of examples of attractive color schemes. More contrasting shades are seen than in the Paris salon, which opened a short time ago. This results in giving the British exposition a brighter aspect. However, the trend toward black and somber colors is in evidence here also, and, as a matter of fact, about 28 per cent. of the cars show these hues.

Those finished in black constitute the largest single group. Blues remain leading favorites. Next after blacks and blues, the most popular are browns, greens, maroons, grays, yellows and reds. Bright and luminous medium shades are characteristic of the greens, blues and reds on display.

COMING EVENTS

OCTOBER

11-26—**Dallas, Tex.** Southwestern Automobile show.
16-25—**London, England.** Olympia Motor Show.
20-22—**Atlantic City, N. J.** National Hardware Association convention.
20-24—**Atlantic City, N. J.** Middle Atlantic Automotive Jobbers' Association convention.
22-23—**New York.** Steel Founders' Society of America, Inc., meeting at Hotel Roosevelt.
22-24—**Pittsburgh, Pa.** Society of Automotive Engineers transportation meeting.

NOVEMBER

3- 6—**Chicago, Ill.** National Tire Dealers Association convention.
7- 8—**Cleveland.** National Battery Manufacturers Association meeting at Hollenden Hotel.
6-16—**Berlin, Germany.** International Automobile Show.
8-15—**Chicago, Ill.** Automobile Salon at Drake Hotel.
10-11—**Cleveland.** Associated Manufacturers of Fabric Automobile Equipment meeting at Hollenden Hotel.
10-13—**Chicago.** American Petroleum Institute meeting at Stevens Hotel.
18-19—**Chicago.** National Association of Finance Companies' annual convention.
13-19—**Cleveland, O.** Motor and Equipment Association and National Standard Parts Association, Joint Show.
15-23—**Paris, France.** Commercial Vehicle Salon.
14-15—**Los Angeles.** Western Motor Clubs conference.
30-Dec. 6.—**New York city.** Automobile Salon at Commodore Hotel.

DECEMBER

6-17—**Brussels, Belgium.** Automobile Exhibition.

JANUARY

3-10—**New York.** National Automobile Show.
8—**New York City.** Society of Automotive Engineers' annual dinner.
10-16—**St. Louis, Mo.** National Roadbuilders' show and convention.
10-17—**Philadelphia.** Automobile Trade Association annual show.
10-18—**Newark, N. J.** Automobile Show.
17-24—**Boston.** Automobile Show.
17-24—**Detroit, Mich.** Annual Show, Convention Hall.
17-24—**Baltimore, Md.** Automobile Show.
19-23—**Detroit, Mich.** Society of Automotive Engineers' annual meeting.
24-31—**Chicago, Ill.** National Automobile Show.
24-31—**Cleveland.** Automobile Show.

FEBRUARY

1- 7—**Minneapolis, Minn.** Automobile Show.
3- —**Minneapolis.** Auto Trade Association convention.
7-14—**Los Angeles.** Automobile Salon.
7-14—**Kansas City.** Automobile Show.
14-21—**Omaha, Neb.** Automobile Show.
16-20—**San Francisco.** Society for Steel Treating National Western Metal and Machinery Exposition.
21-28—**San Francisco.** Automobile Salon.

Automotive Shares Do Well in Weak Market

PRICE AVERAGES DROP SLIGHTLY

Quotations Now Below Last Year's Bottom On Many

NEW YORK, Oct. 20.—Despite the extreme weakness in the general securities market in the past week, price averages in the automotive group of shares listed on the various stock exchanges held firm. The average price of sixty representative automotive stocks declined only .87 of a point for the week, as against a decline of 1.71 points in the preceding week.

The price averages, however, made new lows for the year in each group. Reflecting the extent to which automotive stocks have been liquidated in recent months, the price averages are in all cases well below the low mark for 1929, made during the collapse of the market last fall.

The average price of sixty stocks now stands at 21.45, as against a low of 32.19 in 1929. The passenger car group of twenty stocks has an average price now of 22.07, as against a low last year of 34.25, while the twenty accessory stocks now average 21.55 in price, as against a low in 1929 of 33.38. The rubbers now average 27.85 in price, as against a low of 36.93 last year, while trucks now stand at 13.61, as against 19 last year.

One of the most troublesome rumors the automotive industry has been called upon to meet in recent months was stopped in its tracks Saturday, when Alfred P. Sloan, Jr., president of General Motors, declared that the present common dividend of 75 cents a quarter on the stock of that corporation was not in danger.

As noted in this column previously, the rumor that the G. M. payment would be reduced or eliminated was being widely circulated in Wall Street, where extreme methods were being brought into play to depress the General Motors stock. Mr. Sloan's statement caused a great deal of elation among the holders of the stock and was a source of encouragement to the entire industry, indicating as it does the confidence of General Motors in the coming months.

Following is a comparison of current stock prices among automotive shares with the low marks of 1929 and the high marks of this year:—

	1929 Low	1930 High	Oct. 19
Auburn	120	263¾	74
Bendix	25	57⅜	18¾
B Al & Br.	37	69	19
Borg-Warner	26	50½	17
Briggs Mfg.	8½	24⅛	13
Brockway	14	22¼	4⅞
E. G. Budd.	8⅛	16⅜	5⅞
Check Cab.	18	67⅞	21
Chrysler	26	43	16¾
Cont Mot.	6⅛	8¼	2¾
Eat A & Sp.	18	37¼	16⅛
Elec A-Lite.	50	114⅞	37½
Gen Motors.	33½	54¼	33½
Grah-Paige	7⅜	13⅜	4½
Houd-Hersh.	13	29	5½
Hudson	55⅛	62⅞	21½
Hupp	18	26⅝	7⅞
Kelsey-Hay.	18⅝	38⅞	20
Mack Trucks	40	88½	42⅛
Marl-Rockw.	30	55	26½
Marmon	19	30⅞	5¼
Motor Prod.	36	80	31
Motor Wheel	21	34	17
Nash	38	58½	30½
Packard	13	23⅜	9¾
Reo	10⅛	14⅞	11
Stewart-War	30	47	17⅞
Studebaker	38¼	47¼	24
Timk Roller.	58½	89¼	51
White	27¼	43	28⅛
Willys-Over.	5¼	11	4½
Yellow T&C.	7½	32¾	10¾
Young S&W.	33½	47	19¼

AUTOMOTIVE DAILY NEWS STOCK PRICE AVERAGES

	Oct. 11	Oct. 18	Net Chg.
60 Automotives	23.32	21.45	— .87
20 Passenger cars.	23.10	22.07	—1.03
20 Accessories	22.53	21.55	— .98
10 Rubbers	28.31	27.85	— .46
10 Trucks	14.36	13.61	— .75
ACTIVE STOCKS			
General Motors	35¼	33½	—1¾
Chrysler	18	16¾	— ¼
Packard	10⅛	9¾	— ⅜
Mack Trucks	48¼	42⅛	—6⅛
Electric Auto-Lite.	35⅜	37½	+2⅛
Bendix	19⅜	18¾	— ⅝

OTHER FINANCIAL NEWS

ROSS GEAR AND TOOL

Ross Gear and Tool Company reports for quarter ended September 30, 1930, net profit of $26,442 after charges and taxes, equal to 17 cents a share on 150,000 shares of no par capital stock. This compares with $167,551, or $1.11 a share, in the preceding quarter and $97,411, or 65 cents a share, in the third quarter of 1929.

Net profit for nine months ended September 30, last, was $283,390 after charges and taxes, equivalent to $1.89 a share, comparing with $533,747, or $3.56 a share, in the corresponding nine months of previous year.

CHICAGO PNEUMATIC TOOL

Report of Chicago Pneumatic Tool Company and subsidiaries for quarter ended September 30, 1930, shows net profit of $160,751 after depreciation, interest, amortization and Federal taxes, equivalent to 85 cents a share, on 188,000 no par shares of $3.50 preference stock. This compares with net profit of $343,903, equal after preference stock dividends to 90 cents a share on 199,469 no par shares of common stock in September quarter of 1929.

For nine months ended September 30, last, net profit was $448,523 after above deductions, equal to $2.38 a share on 188,000 shares of preference stock, comparing with net profit of $1,057,512, equal after preference stock dividends to $2.83 a common share in first nine months of 1929.

BIG BUS DEAL LINKS FOUR SOUTHERN LINES

(Continued from Page 1)

completed for leased telephone circuits between Memphis, Nashville and Atlanta, that will enable executives of the company to transact business between the three important headquarters over their own wires.

It is the purpose of the new company, according to the report, to control all highway bus lines in Tennessee, Alabama, Georgia, the Carolinas, Florida and Mississippi, including the present bus lines operating along the Atlantic coast.

A site for a new $300,000 terminal in Memphis has been agreed upon, and is to be completed during 1931. Those financially interested in the merger will meet during the latter part of October in New York. Official announcements are expected to follow this meeting.

FIRESTONE FABRIC PLANT TO REOPEN ON FULL TIME

New Bedford, Mass., Oct. 20.—The Firestone Tire Fabric Manufacturing plant here will be reopened November 3 on its customary full time basis of operation, George W. Danielson, manager, announced yesterday. This means that the regular double shift will be resumed.

All gasoline is divided into two parts

Straight Gasoline

One straight gasoline may have less impurities than another. It may be of lighter weight, or of lower initial boiling point. But the difference is a matter of degree. It is due to the difference in crude oils and difference in refining methods.

The better gasoline is on each of these counts, the better it is for your car.

But straight gasoline, by itself, is not a perfect motor fuel. When compressed inside the cylinders of modern automobile motors it has a tendency to "detonate": to burn unevenly in a white-hot heat that wastes power and causes knocking.

Automotive engineers sought a way to remedy this, and after seven years' research perfected the ingredient called *Ethyl fluid.* A few drops of this fluid control the combustion of an entire gallon of gasoline—make it Ethyl Gasoline.

ETHYL *Gasoline*

Inside the motor Ethyl Gasoline delivers power in smooth, even thrusts because Ethyl fluid controls the combustion of gasoline.

That's why Ethyl Gasoline gives greater power; and does it with less heat, less noise, and less wear and tear on the engine.

But Ethyl Gasoline is *more* than an anti-knock Gasoline. It's the best motor fuel you can buy in every way. The 93 oil refining companies now selling Ethyl use only gasoline that's tested for purity, volatility and other qualities, and to this add Ethyl fluid in sufficient quantity to control combustion.

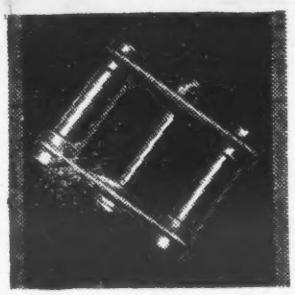
Thus you are always sure of quick-starting, high purity, and other qualities *in addition to controlled combustion* when you buy at the pump that bears the Ethyl emblem. Ethyl Gasoline Corporation, Chrysler Building, New York City.

All cars run better on one kind

WITH ETHYL BRAND OF ANTI-KNOCK COMPOUND — ETHYL GASOLINE CORPORATION NEW YORK, U.S.A. — Knocks out that knock

The active ingredient used in Ethyl fluid is lead

ETHYL GASOLINE



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ELMIRA, NEW YORK

MAJOR SPECIFICATIONS AND MECHANICAL DETAILS

MAKE AND MODEL	Weight—5-P. Sedan	Wheel Base	Engine Make	Fan Belt Type	Thermostat Used	Valve Arrangement	Cylinders	Bore and Stroke	Piston Disp.	Compression Ratio	Tax H. P.	Brake, H. P. and Peak R. P. M.	Pist. Make or Material	No. Main Br.	Oil Purifier	Fuel Clean'r	Carburetor	Air Cleaner
Auburn 6-85	3255	120	Lyc	V	Dole	L	6	2 7/8x4 3/4	185	*5.16	19.8	70@3400	*Alum	4	No	No	Sch	No
Auburn 8-95	3510	125	Lyc	V	Dole	L	8	2 7/8x4 3/4	246	*5.15	26.4	95@3300	*Alum	5	Pur	AC	Sch	No
Auburn 125	3908	130	Lyc	V	Dole	L	8	3 1/8x4 1/2	299	*5.25	33.8	125@3600	*Alum	5	Pur	AC	Sch	No
Austin	§1130	75	Own	F	——	L	4	2.2x3	45.8	5.1	7.8	13@3000	Alum	2	—	—	Til	—
Blackhawk 6	4320	127 1/2	Own	—	Bish-Bab	O	6	3 3/8x4 1/2	241.5	5.10	27.3	85@3150	*Alum	7	Wal	AC	Zen	Un
Blackhawk 8	4185	127 1/2	Own	V	Bish-Bab	L	8	3 x4 3/4	268.5	5.50	28.8	88@3200	*Alum	5	Wal	AC	Zen	AM
Buick 8-50	3170	114	Own	V	Dole	O	8	2 7/8x4 1/4	220.7	4.8	26.45	77@3200	CI	5	AC	—	Mar	AC
Buick 8-60	3795	118	Own	V	Dole	O	8	3 1/16x4 5/8	272.6	4.63	30.02	90@3000	CI	5	AC	—	Mar	AC
Buick 8-80	4255	124	Own	V	Dole	O	8	3 5/16x5	344.8	4.5	35.12	104@2800	CI	5	AC	—	Mar	AC
Buick 8-90	4340	132	Own	V	Dole	O	8	3 5/16x5	344.8	4.5	35.12	104@2800	CI	5	AC	—	Mar	AC
Cadillac V-8	——	134	Own	V	Yes	LV	8	3 3/8x4 13/16	353	5.35	36.45	95@3000	CI	3	—	Gas	Own	—
Cadillac V 12	5480	140-143	Own	V	Own	O	12	3 1/8x4	368	5.5	46.9	135@3400	CI	4	AC	Gas	Own	—
Cadillac V-16	6100	148	Own	V	Yes	O	16	3 x4	452.0	5.50	57.5	165@3400	CI	5	AC	Gas	Own	None
Chevrolet	2500	107	Own	V	Yes	O	6	3 5/16x3 3/4	194.0	5.01	26.3	46@2600	CI	3	—	AC	Car	AC
Chrysler 6	2745	*169 1/4	Own	V	Yes	L	6	3 1/8x4 1/4	195.5	5.29	23.44	62@3200	*Alum	4	—	Yes	Car	No
Chrysler 70	3435	*168 1/2	Own	V	Yes	L	6	3 3/8x5	268.4	5.00	27.34	93@3200	*Alum	7	Pur	AC	Str	Un
Chrysler 66	2850	*163 1/4	Own	V	——	L	6	3 1/8x4 3/4	218.6	5.00	23.43	68@3000	Alum	7	Pur	AC	Str	Un
Chrysler 8	——	*186 1/16	Own	V	Yes	L	8	3 x4 1/4	240.3	5.40	28.8	82@3400	*Alum	5	Yes	—	Str	Yes
Chrysler Imp. 8	——	*211	Own	V	Yes	L	8	3 1/2x5	384.8	5.01	39.2	125@3200	*Alum	9	Yes	—	Str	Yes
Cord (Fr. Wh. D.)	4530	137 1/2	Lyc	V	——	L	8	3 1/4x4 1/2	298.6	5.25	33.8	125@3600	*Alum	5	Yes	AC	Sch	—
De Soto 6	2705	*169 1/8	Own	V	Yes	L	6	3 1/8x4 1/8	189.81	5.20	23.44	60@3400	*Alum	4	—	Yes	Car	Un
De Soto 8	2965	*177	Own	V	Yes	L	8	2 7/8x4	207.7	5.20	26.45	70@3400	*Alum	5	—	Yes	Str	Yes
Dodge Six D D	2668	*168 5/8	Own	V	Yes	L	6	3 1/8x4 1/8	189.8	5.20	23.4	60@3400	*Alum	4	No	No	Car	—
Dodge 8	3043	*176 7/8	Own	V	Yes	L	8	2 7/8x4 1/4	220.7	5.20	26.45	75@3400	*Alum	5	Pur	No	Str	Un
Durant 6-14	2950	*172 1/4-176	Con	V	Bish-Bab	L	6	3 1/4x4	199	5.32	25.4	58@3100	*Alum	4	AC	AC	Str	AC
Durant 6-17	3290	*175 3/4-179 1/2	Con	V	Bish-Bab	L	6	3 5/8x4 5/8	248	5.06	27.34	70@3000	*Alum	7	AC	AC	Str	AC
Elcar 6-75	2942	117	Lyc	V	Yes	L	6	2 7/8x4 3/4	185	5.25	19.8	61@3000	*Alum	4	Pur	Gas	Sch	—
Elcar 140 and 130	†3980	135-130	Con	V	Yes	L	8	3 3/8x4 1/2	322	5.25	36.45	140@3300	*Alum	5	Pur	Gas	Sch	—
Elcar 8-95-96	3299	123	Lyc	V	Yes	L	8	2 7/8x4 3/4	246.7	5.25	26.5	90@3000	*Alum	5	Pur	Gas	Sch	—
Essex	2805	113	Own	V	——	†L	6	2 3/4x4 1/2	160.4	5.80	18.15	60@3600	Alum	3	—	Ste	Mar	AC
Ford A	2375	103 1/2	Own	V	——	L	4	3 7/8x4 1/4	200.5	4.22	24.03	40@2200	Alum	3	—	—	Zen	—
Franklin 145	3930	125	Own	—	Bish-Bab	*O	6	3 1/2x4 3/4	274	5.30	29.4	95@3000	Alum	7	AC	AC	Str	AC
Franklin 147	4230	132	Own	—	Bish-Bab	*O	6	3 1/2x4 3/4	274	5.30	29.4	95@3000	Alum	7	AC	AC	Str	AC
Gardner 136	3330	122	Lyc	V	Dole	L	8	2 7/8x4 3/4	246.6	5.15	26.5	70@3500	*Alum	4	Pur	Gas	Sch	—
Gardner 148	3500	125	Lyc	V	Dole	L	8	2 7/8x4 3/4	246.6	5.15	26.5	100@3300	*Alum	5	Pur	Gas	Sch	AM
Gardner 150	3890	130	Lyc	V	Dole	L	8	3 1/4x4 1/2	298.6	5.25	33.8	126@3300	*Alum	5	Pur	Gas	Sch	AM
Graham Std. 6	3175	115	Own	F	Dole	L	6	3 1/8x4 1/2	207	5.41	23.44	66@3200	*Alum	7	No	AC	DL	AC
Graham Spl. 6	3390	115	Own	F	Dole	L	6	3 1/4x4 1/2	224	5.49	25.35	76@3400	*Alum	7	AC	AC	DL	AC
Graham Std. 8	3795	122	Own	V	Bish-Bab	L	8	3 1/4x4 1/2	298	5.20	33.80	100@3400	*Alum	5	AC	AC	DL	AC
Graham Spl. 8	3875	122	Own	V	Bish-Bab	L	8	3 1/4x4 1/2	298	5.20	33.80	100@3400	*Alum	5	AC	AC	DL	AC
Graham Cust. 8	4300	127	Own	F	Bish-Bab	L	8	3 3/8x4 1/2	322	5.41	36.45	120@3200	*Alum	5	AC	AC	John	AC
Graham Cust. 8	4405	137	Own	F	Bish-Bab	L	8	3 3/8x4 1/2	322	5.41	36.45	120@3200	*Alum	5	AC	AC	John	AC
Hudson Super 8	3200	119-126	Own	V	——	L	8	2 3/4x4 1/2	213.8	5.80	24.2	80@3600	Alum	5	—	Ste	Mar	AC
Hupmobile Cen. 6	2900	114	Own	V	Yes	L	6	3 1/4x4 1/4	211.6	5.10	25.35	70@3200	Alum	4	Pur	Ste	Str	Yes
Hupmobile Cen. 8	3175	118	Own	V	Pines	L	8	2 7/8x4 5/8	240.2	5.20	26.45	90@3200	Alum	5	Pur	Ste	Str	Yes
Hupmobile C	3725	121	Own	V	Pines	L	8	3 x4 3/4	268.6	5.20	28.8	100@3200	CI	5	Pur	Ste	Str	Yes
Hupmobile H & U	**	125-137	Own	V	Pines	L	8	3 1/2x4 3/4	365.6	5.20	39.2	133@3400	Alum	5	Pur	Ste	Str	AM
Jordan St. Line 80	3490	120	Con	V	Pines	L	8	2 7/8x4 3/4	246.7	5.10	26.5	80@3000	*Alum	5	Ste	AC	Str	AC
Jordan G. Ninety 8	3700	125	Con	V	Pines	L	8	3 x4 3/4	268.6	5.10	28.9	85@3200	*Alum	5	Ste	Ste	Str	AM
La Salle 345	——	134	Own	V	Yes	LV	8	3 3/8x4 13/16	353	5.35	36.45	95@3000	CI	3	—	Gas	Own	—
Lincoln	5030	136	Own	V	——	LV	8	3 1/2x5	384	4.83	39.2	90@2800	Alum	5	Pur	Own	Str	Un
Marmon-Roosevelt	2833	*172	Own	V	Dole	L	8	2 3/4x4 1/4	201.9	5.25	24.2	77@3400	Alum	5	—	—	Str	AC
Marmon Eight 69	3103	*180	Own	V	——	L	8	2 13/16x4 1/4	211.2	5.50	25.4	84@3400	Alum	5	AC	AC	Sch	AC
Marmon Eight 79	4028	*191	Own	V	Pines	L	8	3 1/16x4 3/4	303.2	5.50	32.5	110@3400	Alum	5	AC	AC	Sch	AC
Marmon Big Eight	4363	*202	Own	V	Pines	L	8	3 1/4x4 3/4	315.2	5.50	33.8	125@3400	Alum	5	AC	AC	Sch	AC
Nash Six-60	2800	114 1/4	Own	V	Bish-Bab	L	6	3 1/8x4 3/8	201.3	5.00	23.4	60@2800	*Alum	7	AC	AC	Car	AC
Nash Eight-70	3000	116 1/4	Own	V	Bish-Bab	L	8	2 7/8x4 3/8	227.2	5.00	26.4	75@3200	*Alum	9	AC	AC	Car	AC
Nash Eight-80	3360	121	Own	V	Pines	O	8	3 x4 1/4	240	5.25	28.8	85@3200	*Alum	9	AC	AC	Mar	AC
Nash Eight-90	4000	124-133	Own	V	Pines	O	8	3 1/4x4 1/2	298.6	5.25	33.8	115@3600	*Alum	9	AC	AC	Str	AC
Oakland V-8	3205	117	Own	V	Yes	H	8	3 1/16x3 3/8	251.0	5.00	37.8	85@3000	S St	3	—	AC	Mar	AC
Oldsmobile	2940	113 1/2	Own	V	——	L	6	3 3/16x4 1/8	197.5	5.20	24.4	62@3000	CI	4	AC	AC	John	AC
Packard 826-833	4479	127 1/2-134 1/2	Own	V	——	L	8	3 7/16x5	320.0	—	32.5	100@3200	*Alum	9	—	—	Own	—
Packard 840-845	4955	140 1/2-145 1/2	Own	V	——	L	8	3 1/2x5	384.8	—	39.2	120@3200	*Alum	9	—	—	Own	—
Peerless St. 8	3642	118	Own	V	Bish-Bab	L	8	2 7/8x4 3/4	246.0	5.00	26.45	85@3200	*Alum	5	Pur	AC	Sch	AC
Peerless Master 8	4521	125	Own	V	Bish-Bab	L	8	3 3/8x4 1/2	322	5.00	36.45	115@3200	*Alum	5	Pur	AC	Sch	AC
Peerless Custom 8	4766	138	Own	V	Bish-Bab	L	8	3 3/8x4 1/2	322	5.00	36.45	120@3200	*Alum	5	Pur	AC	Sch	AC
Pierce-Arrow C	4523	132	Own	V	Yes	L	8	3 3/8x4 3/4	340	5.07	36.45	115@3000	*Alum	9	Yes	Yes	Str	Un
Pierce-Arrow B	4304	134	Own	V	Yes	L	8	3 1/2x4 3/4	366	5.07	39.2	125@3000	*Alum	9	Yes	Yes	Str	Un
Pierce-Arrow B	4713	139	Own	V	Yes	L	8	3 1/2x4 3/4	366	5.07	39.2	125@3000	*Alum	9	Yes	Yes	Str	Un
Pierce-Arrow A	4831	144	Own	V	Yes	L	8	3 1/2x5	385	5.07	39.2	132@3000	*Alum	9	Yes	Yes	Str	Un
Plymouth	2595	*167	Own	V	——	L	4	3 5/8x4 3/4	196	4.60	21.03	48@2800	*Alum	3	—	Yes	Car	—
Pontiac	2745	110	Own	V	Var	L	6	3 1/8x3 7/8	200.0	4.90	26.3	60@3000	S St	3	—	AC	Mar	Yes
Reo Royale	——	135	Own	V	——	L	8	3 3/8x5	358	—	—	125@3300	Alum	9	Han	AC	Sch	Own
Reo Flying Cloud	——	130	Own	V	——	L	8	3 3/8x5	358	—	—	125@3300	Alum	9	Han	AC	Sch	Own
Reo Flying Cloud	——	125	Own	V	——	L	6	3 5/8x5	268	—	—	80@3200	Alum	7	Han	—	Sch	Un
Ruxton Fr. Wh. Dr.	4000	130	Own	V	Yes	L	8	3 x4 3/4	268.6	5.09	28.8	100@3400	*Alum	5	Yes	AC	Zen	AM
Studebaker Six	2950	114	Own	V	Dole	L	6	3 1/4x4 1/8	205.3	5.20	25.4	70@3200	CI	4	Han	Ste	Sch	—
Studebaker Dict. 8	3155	114	Own	V	Dole	L	8	3 1/16x3 3/4	221.0	5.10	30.0	81@3200	*Alum	9	Pur	Ste	Str	AM
Studebaker Com. 8	3520	124	Own	V	Dole	L	8	3 1/16x4 1/4	250.4	5.20	30.0	101@3200	*Alum	9	Han	Ste	Str	AM
Studebak'r Pres. 80	4230	130	Own	V	Dole	L	8	3 1/2x4 3/8	337	5.10	39.2	122@3200	*Alum	9	Han	Ste	Str	AM
Studebak'r Pres. 90	*4360	136	Own	V	Dole	L	8	3 1/2x4 3/8	337	5.10	39.2	122@3200	*Alum	9	Han	—	Str	AM
Stutz	4918	134 1/2-145	Own	—	Yes	O	8	3 3/8x4 1/2	322	5.10	36.5	112@3300	*Alum	9	Wal	Gas	Zen	AM
Viking Eight	3620	125	Own	V	Yes	H	8	3 3/8x3 5/8	259.5	5.10	36.5	81@3200	CI	3	Own	AC	John	AC
Windsor 6-69	3195	120	Con	V	Dole	L	6	2 7/8x4 3/4	185	5.00	19.8	47.5@2600	*Alum	4	AC	—	Str	—
Windsor 6-72	2930	120	Con	V	Dole	L	6	3 3/8x4	215	4.94	27.3	66@3200	*Alum	7	AC	—	Str	—
Windsor 6-77	2930	120	Con	V	Dole	L	6	3 3/8x4	215	4.94	27.3	66@3200	*Alum	7	AC	—	Str	—
Windsor 8-85	3600	125	Con	V	Dole	L	8	3 x4 3/4	269	5.00	28.8	85@3100	*Alum	5	AC	Gas	Str	AC
Windsor 8-92	3600	125	Con	V	Dole	L	8	3 x4 3/4	269	5.00	28.8	85@3100	*Alum	5	AC	Gas	Str	AC
Whippet 96 A	2673	103 1/4	Own	V	No	L	4	3 1/8x4 3/4	145.7	5.40	15.6	40@3200	CI	3	No	No	Til	No
Willys-Six 98-B	2623	110	Own	V	Var	L	6	3 1/4x3 7/8	193	5.56	25.3	65@3400	CI	4	No	Til	Til	Til
Willys 8-80	3076	120	Own	V	Var	L	8	3 1/8x4	245.4	5.40	31.25	80@3200	CI	5	No	Til	Til	Til
Willys-Knt. 66-B	3868	120	Own	V	Var	K	6	3 3/8x4 3/4	255	5.50	27.3	87@3200	*Alum	7	Ski	Til	Til	Til
Willys-Knight 87	3001	112 1/2-115	Own	V	Var	K	6	2 13/16x4 3/8	177.9	5.88	20.7	55@3000	*Alum	7	Ski	Til	Til	Til

KEY TO ABBREVIATIONS

Weight—*Studebaker 7-pass. sedan. †On Elcar 140 4,375 pounds. §Austin Standard 2-passenger coupe. **Hupmobile model H weighs 3955 and model U 4225.

Wheel Base—*Over all length of chassis instead of wheel base, which manufacturers refuse to give.

Engine Make—Con, Continental; Lyc, Lycoming.

Fan Belt Type—V, V-type; F, flat.

Thermostat—Bish-Bab, Bishop & Babcock; Dole, Dole Valve Co., Chicago, Ill.; Pines, Pines Winterfront; Var, various makes.

Valve Arrangement—L, L head; H, horizontal; O, overhead; K, sleeve valve; LV, V-type L head.

*Air cooled. †Thermo syphon water circulation.

Compression Ratio—*Optional on the Auburn.

Piston Material—*Alum, aluminum with invar struts; Alum, aluminum alloy; CI, cast iron; S St, semi-steel.

Oil Purifier—Pur, Purolator; Wal, Wall; Han, Handy; AC, AC Spark Plug Company; Ste, Stewart-Warner; Ski, Skinner.

Fuel Cleaner—AC, AC Spark Plug Co.; Gas, Gascolator; Ste, Stewart-Warner; Til, Tillotson.

Carburetor—Sch, Wheeler Schebler; Zen, Zenith; Mar, Marvel; Car, Carter; Str, Stromberg; DL, Detroit Lubricator; John, Johnson; Til, Tillotson.

Air Cleaner—AC, AC Spark Plug Company; AM, Air Maze; Un, United; Til, Tillotson.

Front End Drive—Link, Link Belt; Tex, Texolite; Cel, Celeron; Ram, Ramsey; Whit, Whitney Chain; Diam, Diamond Chain; Morse, Morse Chain Company; Var, various makes of chains; Var-G, various makes of gears.

Ignition, Generator and Starter—Aut-L, Auto-Lite; Del-R, Delco-Remy; N. E., North East; Dyn, Dyneto. *Nash—Indicates twin ignition. *Bendix starter used.

Clutch—Borg, Borg & Beck; Br-L, Brown-Lipe; Rock, Rockford Machine; Long, Long Clutch Company.

Gearset—War G., Warner Gear Company; Detr, Detroit Gear; Mun, Muncie Gear; WC, Warner Corporation. *Three or four speed gear sets as shown are available for either model.

Universals—Un P, Detroit Universal Products Company; Spic, Spicer Manufacturing Corporation; MM, Mechanics Universal Joint Company, Rockford, Ill.; Cle, Cleveland.

Rear Axle—Col, Columbia; Sal, Salisbury; Cla, Clark Equipment Company; Tim, Timken.

Ratio—Optional on the Auburn.

Steering Gear—Gem, Gemmer; Ross, Ross Gear and Tool Company; Sag, Saginaw;

COMMERCIAL BODY BUILDERS GROUP MEETS IN ST. LOUIS

(Continued from Page 1)

the scope of the society has become national in character and importance with the participation membership in the various branches of the truck equipment industry.

Officers of the association are: A. A. Ritcheson, president; J. E. Finney, first vice-president; Fred Anheuser, second vice-president; J. W. Teal, secretary, and A. C. Prucha, treasurer.

Due to the fact that the motor truck industry has gone forward by leaps and bounds, the association realized that a co-ordinated service and merchandising set-up is necessary. The truck industry and its component parts now offer a comprehensive and co-ordinated service and sales set-up through the National Commercial Body and Equipment Association.

It is the purpose of the association to offer to the truck chassis manufacturer, the truck dealer and the truck user, a complete, quick and through service and sales facilities throughout the entire United States. Not only should this speed up production, but it should increase sales in general and become beneficial to the truck industry from the manufacturer down to the consumer.

That it is a consumer as well as a manufacturer and dealer problem is evinced by the fact that the co-operation of the various branches of membership in the association will make possible many economies in service and merchandising which will be passed on to the consumer and incidentally benefiting the truck dealer and chassis manufacturer as well. The interests of the ultimate consumer have become the interest of the National Commercial Body and Equipment Association.

OF PRESENT AMERICAN PASSENGER CAR MODELS

Make and Model	Front End Drive	Ignition System	Gen. and Starter	Clutch	Gear Set and Speeds	Universals	Rear Axle	Ratio	Brakes	Steering Gear	Springs Rear	Spring Shackles	Chassis Lubric.	Tires
Auburn 6-85	Link	Del-R	*Del-R	Long	War-G 3	Un P	Col ½	*4.9	H	Ross	S 56¾	Own	Bijur	18x5.50
Auburn 8-95	Link	Del-R	*Del-R	Long	War-G 3	Un P	Col ½	*4.7	H	Ross	S 56¾	Own	Bijur	18x6.00
Auburn 125	Link	Del-R	*Del-R	Long	Detr 3	Un P	Col. ½	*4.45	H	Ross	S 56¾	Own	Bijur	18x6.50
Austin	Gear	Aut-L	*Aut-L	Rock	War-G 3	Spic	Sal	5.25	M	Say-B	Cant	Own	Al-Z	18x3.75
Blackhawk 6	Link	Del-R	Del-R	Borg	Detr 4	Un P	Sal ½	4.75	H	Gem	S 60	Own	Bijur	31x6.00
Blackhawk 8	Link	Del-R	*Del-R	Borg	Detr 4	Un P	Sal ½	4.75	H	Gem	S 60	Own	Bijur	31x6.00
Buick 8-50	Tex	Del-R	Del-R	Own	Own 3	Own	Own ½	4.54	M	Sag	S 54½	Tryon	Al-Z	18x5.25
Buick 8-60	Tex	Del-R	Del-R	Own	Own 3	Own	Own ¾	4.45	M	Sag	S 55¼	Own	Al-Z	19x5.50
Buick 8-80	Tex	Del-R	Del-R	Own	Own 3	Own	Own ¾	4.27	M	Sag	S 58⅞	Own	Al-Z	19x6.50
Buick 8-90	Tex	Del-R	Del-R	Own	Own 3	Own	Own ¾	4.27	M	Sag	S 58⅞	Own	Al-Z	19x6.50
Cadillac V-8	Morse	Del-R	Del-R	Own	Own 3	Spic	Own ¾	4.75	Own-M	Sag	S 58	Own	Alem	19x6.50
Cadillac V 12	Morse	Del-R	Del-R	Own	Own 3	Spic	Own ¾	——	Own-M	Own	S 58	Own	Alem	19x7.00
Cadillac V-16	Morse	Del-R	Del-R	Own	Own 3	Spic	Own ¾	4.39	Own	Own	S 60	Own	Alem	19x7.00
Chevrolet	Var	Del-R	*Del-R	Own	Own 3	Own	Own ½	3.82	M	Own	S 54	Tryon	Alem	19x4.75
Chrysler 6	Morse	Del-R	Del-R	Own	Own 3	Un P	Own ½	4.60	H	War	S 53¾	Tryon	Al-Z	19x5.00
Chrysler 70	Morse	Del-R	Del-R	Own	Own 4	Un P	Own ½	3.82	H	War	S 57¾	Rub B	Al-Z	18x5.50
Chrysler 66	Morse	Del-R	Del-R	Own	Own 3	Un P	Own ½	4.70	H	War	S 54⅝	Rub B	Al-Z	18x5.50
Chrysler 8	Morse	Del-R	Del-R	—	Own 4	—	Own ½	4.10	H	War	S 54⅝	——	Al-Z	18x5.50
Chrysler Imperial 8	Morse	Del-R	Del-R	—	Own 4	—	Own ½	3.81	H	Ross	S 57½	——	Al-Z	18x7.00
Cord (Fr. Wh. Dr.)	Link	Del-R	*Del-R	Long	Detr 3	UnP&MM	Col F	4.41	H	Gem	S 62	Own	Bijur	18x7.00
De Soto 6	Var	Del-R	Del-R	Borg	Own 3	Un P	Own ½	4.6	H	Own	S 53¾	——	Al-Z	19x5.00
De Soto 8	Var	Del-R	Del-R	Borg	Own 3	Un P	Own ½	4.6	H	Own	S 54⅝	Rub B	Al-Z	19x5.25
Dodge 6 D D	Morse	Del-R	Del-R	Borg	Own 3	Un P	Own ½	4.9	H	War	S 53¾	Tryon	Al-Z	19x5.00
Dodge 8	Morse	Del-R	Del-R	Borg	Own 3	Un P	Own ½	4.6	H	War	S 54⅝	Rub B	Al-Z	18x5.50
Durant 6-14	Morse	Aut-L	*Aut-L	Borg	Own 3	Spic	Own ½	4.4	S D	Own	S 55	Tryon	Alem	29x5.00
Durant 6-17	Morse	Aut-L	*Aut-L	Borg	Own 4	Spic	Own ½	3.72	S D	Own	S 55	Tryon	Alem	29x5.50
Elcar 6-75	Link	Del-R	*Del-R	Long	War-G 3	Spic	Sal ½	4.88	H	Ross	S 53½	Belf	Alem	29x5.00
Elcar 140 and 130	Link	Del-R	*Del-R	Long	War-G 4	Spic	Sal ½	....	H	Ross	S 57	Belf	Alem	30x7.00
Elcar 8-95-96	Link	Del-R	*Del-R	Long	War-G 3	Spic	Sal ½	4.90	H	Ross	S 56	Belf	Alem	29x5.50
Essex	Morse	Aut-L	*Aut-L	Own	Own 3	Spic	Own ½	5.41	Bendix	Gem	S 54⅝	Own	Alem	19x5.00
Ford A	Cel	Own	*Own	Own	Own 3	Own	Own ¾	3.7	M	Gem	S Tr	Own	Al-Z	19x4.75
Franklin 145	Ram	Del-R	*Del-R	Br-L	*Detr 4	Spic	Own ½	4.54	H	Gem	El 42	None	Al-Z	19x6.50
Franklin 147	Ram	Del-R	*Del-R	Br-L	*Detr 4	Spic	Own ½	4.73	H	Gem	El 42	None	Al-Z	19x6.50
Gardner 136	Link	Del-R	*Del-R	Borg	War-G 4	Spic	Col ½	4.45	H	Ross	S 54	O-N	Alem	29x5.50
Gardner 148	Link	Del-R	*Del-R	Borg	Own 4	Spic	Col ½	4.45	H	Ross	S 54	O-N	Alem	29x5.50
Gardner 150	Link	Del-R	*Del-R	Borg	War-G 3	Spic	Col ½	4.45	H	Ross	S 57	O-N	Alem	30x6.50
Graham Std. 6	Link	Del-R	*Del-R	Long	War-G 3	Un P	Sal ½	4.7	H	Ross	S 54	Tryon	Al-Z	19x5.25
Graham Spl. 6	Link	Del-R	*Del-R	Long	War-G 4	Un P	Sal ½	3.91	H	Ross	S 54	Tryon	Al-Z	18x5.50
Graham Std. 8	Link	Del-R	Del-R	Long	W C 3	Un P	Sal ½	4.45	H	Ross	S 56	Rub B	Al-Z	18x6.00
Graham Spl. 8	Link	Del-R	Del-R	Long	War-G 4	Un P	Sal ½	3.90	H	Ross	S 56	Rub B	Al-Z	18x6.00
Graham Cust. 8	Link	Del-R	Del-R	Long	War-G 4	Un P	Cla ½	3.92	H	Ross	S 58	Own	Bijur	19x6.50
Graham Cust. 8	Link	Del-R	Del-R	Long	War-G 4	Un P	Cla ½	3.92	H	Ross	S 58	Own	Bijur	19x6.50
Hudson Super 8	Morse	Aut-L	*Aut-L	Own	Own 3	Spic	Own ½	4.7	Bendix	Gem	S 54⅝	Own	Alem	18x5.50
Hupmobile Cen 6	Morse	Aut-L	*Aut-L	Borg	Detr 3	MM	Sal ½	4.70	S D	Ross	S 53	Tryon	Al-Z	19x5.50
Hupmobile Cen 8	Morse	Aut-L	*Aut-L	Borg	Detr 3	Un P	Sal	4.55	S D	Ross	S 52¾	Rub B	Al-Z	19x5.50
Hupmobile C	Morse	Aut-L	*Aut-L	Long	Detr 3	Un P	Own ½	4.55	S D	Ross	S 54	Own	Alem	31x6.00
Hupmobile H and U	Morse	Aut-L	*Aut-L	Long	Detr 3	Un P	Own ½	4.07	S D	Ross	S 57	Own	Alem	19x6.50
Jordan St. Line 80	Morse	Aut-L	*Aut-L	Long	War-G 3	Cle	Col ½	4.9	H	Gem	S 55¾	O-N	Alem	28x5.50
Jordan G. Ninety 8	Morse	Aut-L	*Aut-L	Long	War-G 3	Cle	Col ½	4.25	H	Gem	S 55¾	O-N	Alem	30x6.00
La Salle 345	Morse	Del-R	Del-R	Own	Own 3	Spic	Own ¾	4.75	Own-M	Sag	S 58	Own	Alem	19x6.50
Lincoln	Morse	Del-R	Del-R	Own	Own 3	Spic	Tim F	4.58	Bendix	Own	S 60	Own	Alem	20x7.00
Marmon-Roosevelt	Diam	Del-R	*Del-R	Rock	War-G 3	Spic	Sal ½	4.9	Bendix	Ross	S 54⅛	Tryon	Al-Z	19x5.50
Marmon Eight-69	Diam	Del-R	*Del-R	Rock	War-G 3	Spic	Sal ½	4.9	Bendix	Ross	S 56⅝	Rub B	Al-Z	19x5.50
Marmon Eight-79	Diam	Del-R	*Del-R	Rock	Detr 3	Spic	Sal ½	4.7	Bendix	Ross	S 60	Rub B	Al-Z	19x6.00
Marmon Big 8	Diam	Del-R	*Del-R	Rock	War-G 4	Spic	Sal ½	4.45	Bendix	Ross	S 60	Rub B	Al-Z	19x6.50
Nash Six-60	Cel	Aut-L	*Aut-L	*Borg	Own 3	Own	Own ½	5.1	S D	Ross	S 50⅞	Tryon	Alem	19x5.00
Nash Eight-70	—	Aut-L	*Aut-L	Borg	Own 3	Own	Own ½	5.1	S D	Ross	S 50⅞	Tryon	Bijur A	19x5.25
Nash Eight-80	—	*Aut-L	*Aut-L	Borg	Own 3	Own	Own ½	4.7	S D	Gem	S 55	Tryon	Bijur A	18x5.50
Nash Eight-90	Diam	*Aut-L	*Aut-L	Borg	Own 3	Own	Own ½	4.5	Bendix	Gem	S 56¾	Own	Bijur A	19x6.50
Oakland V-8	Morse	Del-R	Del-R	Own	Own 3	MM	Own	4.42	M	Sag	S 54½	Tryon	Al-Z	28x5.50
Oldsmobile	Var	Del-R	Del-R	Borg	Mun 3	Un P	Own ½	4.54	Own	Sag	S 54½	Tryon	Alem	28x5.25
Packard 826-833	Morse	Dyn	*Dyn	—	Own 4	—	Own ½	——	M	Own	S 60½	——	Bijur	19x6.50
Packard 840-845	Morse	Dyn	*Dyn	—	Own 4	—	Own ½	——	M	Own	S 60½	——	Bijur	19x7.00
Peerless St. 8	Link	Aut-L	*Aut-L	Rock	War-G 3	Spic	Sal ½	4.7	Bendix	Ross	S 56⅝	Rub B	Alem	29x5.50
Peerless Master 8	Link	Aut-L	*Aut-L	Rock	War-G 4	Spic	Sal ½	4.45	Bendix	Ross	S 60	Rub B	Alem	31x6.00
Peerless Custom 8	Link	Aut-L	*Aut-L	Rock	War-G 4	Spic	Sal ½	4.45	Bendix	Ross	S 60	Rub B	Alem	31x6.50
Pierce-Arrow C	Morse	Del-R	Del-R	Long	Own 4	Spic	Own ½	4.58	Bendix	Gem	S 60	Faf	Al-Z	19x6.50
Pierce-Arrow B	Morse	Del-R	Del-R	Long	Own 4	Spic	Own ½	4.08	Bendix	Gem	S 60	Faf	Al-Z	18x7.00
Pierce-Arrow B	Morse	Del-R	Del-R	Long	Own 4	Spic	Own ½	4.42	Bendix	Gem	S 60	Faf	Al-Z	18x7.00
Pierce-Arrow A	Morse	Del-R	Del-R	Long	Own 4	Spic	Own ½	4.42	Bendix	Gem	S 60	Faf	Al-Z	18x7.00
Plymouth	Cel	Del-R	Del-R	Rock	Own 3	Own	Own ½	4.37	H	War	S 53⅝	Tryon	Al-Z	19x4.75
Pontiac	Morse	Del-R	Del-R	Own	Own 3	MM	Own	4.42	M	Sag	S 54	Tryon	Al-Z	29x5.00
Reo Royale	Morse	Del-R	Del-R	Long	Own 3	Un P	Own	4.07	H	Ross	S 57¼	Own	Far	6.50x18
Reo Flying Cloud	Morse	Del-R	Del-R	Long	Own 3	Un P	Own	4.07	H	Ross	S 57¼	Own	Al-Z	6.50x18
Reo Flying Cloud	Morse	Del-R	Del-R	Long	Own 3	Un P	Own	4.42	H	Ross	S 55	Own	Al-Z	6.50x18
Ruxton (Fr. Wh. Dr.)	Link	Aut-L	*Aut-L	Long	Own 3	Own	Own	4.25	H	Gem	S 55	Own	Alem	31x6.00
Studebaker Six	Whit	Del-R	*Del-R	Long	Own 3	Spic	Own ½	4.73	Bendix	Ross	S 54	Tryon	Alem	19x5.25
Studebaker Dict. 8	Var G	Del-R	*Del-R	Long	War-G 3	Spic	Own ½	5.11	Bendix	Ross	S 54	Tryon	Al-Z	19x5.25
Studebaker Com. 8	Var G	Del-R	*Del-R	Long	Own 3	Spic	Own ½	4.73	Bendix	Ross	S 56	Faf	Al-Z	19x6.00
Studebaker Pres. 80	Var G	Del-R	Del-R	Long	Own 3	Spic	Own ½	4.31	Bendix	Ross	S 60	Faf	Al-Z	19x6.50
Studebaker Pres. 90	Var G	Del-R	Del-R	Long	Own 3	Spic	Own ½	4.31	Bendix	Ross	S 60	Faf	Al-Z	19x6.50
Stutz	Link	Del-R	Del-R	Borg	Detr 4	MM	Tim ½	4.5	H	Gem	S 62¼	Own	Bijur	32x7.00
Viking Eight	Whit	Del-R	Del-R	Borg	Mun 3	MM	Own ¾	4.63	Bendix	Sag	S 58	Tryon	Alem	30x6.00
Windsor 6-69	Morse	Aut-L	*Aut-L	Borg	War-G 3	MM	Col ½	4.9	H	Ross	S 54	O-N	Alem	29x5.25
Windsor 6-72	Link	Del-R	*Del-R	Borg	War-G 3	MM	Col ½	4.9	H	Ross	S 54	O-N	Alem	29x5.50
Windsor 6-77	Link	Del-R	*Del-R	Borg	War-G 4	MM	Col ½	3.9	H	Ross	S 54	O-N	Alem	29x5.50
Windsor 8-85	Link	Del-R	*Del-R	Borg	War-G 3	MM	Col ½	4.63	H	Ross	S 54	O-N	Alem	31x6.00
Windsor 8-92	Link	Del-R	*Del-R	Borg	War-G 4	MM	Col ½	3.9	H	Ross	S 54	O-N	Alem	31x6.50
Whippet 96 A	Var	Aut-L	Aut-L	Borg	Own 3	MM	Own ½	4.55	Bendix	Own	S 40½	Tryon	Alem	19x4.75
Willys-Six 98 B	Var	Aut-L	Aut-L	Borg	Own 3	MM	Own ½	4.60	Bendix	Own	S 49¾	Tryon	Alem	19x5.00
Willys 8-80	Link	Aut-L	Aut-L	Borg	Own 3	MM	Own ½	4.60	Bendix	Ross	S 56	Tryon	Alem	19x5.50
Willys-Knight 66 B	Link	N E	N E	Rock	Own 3	MM	Own ½	4.60	Bendix	Ross	S 57½	Own	Bijur	19x6.00
Willys-Knight 87	Link	Aut-L	Aut-L	Rock	Own 3	MM	Own ½	4.89	Bendix	Own	S 53	Tryon	Alem	19x5.50

Say-B, Saylor-Beall Manufacturing Company, Detroit, Mich.; War, Warner.

Brakes—H, hydraulic; M, mechanical; SD, steeldraulic; Bendix, Bendix Brake Corporation.

Rear Springs—S, semi-elliptic; El, full elliptic; Cant, semi-cantilever; S-Tr, semi-transverse.

Spring Shackles—Tryon, Willys-Morrow Company; Rub B, Rubber Shock Insulator Company; Faf, Fafnir Bearing Company; O-N, O-N Spring Shackle Company; Belf, Belflex Corporation.

Chassis Lubricator—Alem, Alemite; Al-Z, Alemite Zerk; Alem A, Alemite automatic; Bijur, Bijur Lubricating Corp.; Bijur A, Bijur automatic centralized; Cen, Central magazine; Far, Farval.

FLAT RATE CAB ASS'N FORMED IN CONNECTICUT

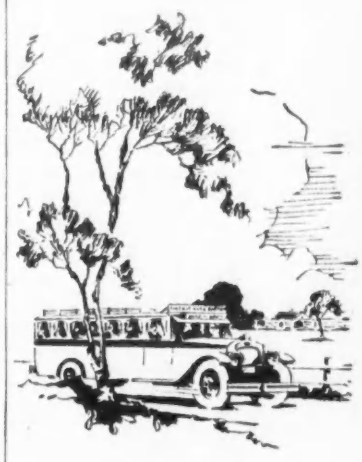
New Haven, Conn., Oct. 20.—In order to combat the movement now on foot to force meter service on public service vehicles, Connecticut taximen have formed an organization known as the Connecticut Flat Rate Cab Association. Two hundred cabmen attended a meeting here, at which officers were elected as follows: Samuel W. Gallagher, Hartford, president; James J. Leon, Bridgeport, vice-president; Salvatore Cationa, Stamford, secretary, and Joseph F. Keating, Danbury, treasurer. The Public Utilities Commission is holding hearings on the proposal to ban flat-rate cab transportation.

CAR SALES FAIRLY GOOD, TRENTON DEALERS REPORT

Trenton, N. J., Oct. 20.—Automobile sales are reported fairly good by members of the Trenton Automobile Trade Association at the luncheon meeting of the dealers at the Carteret Club. It was the first gathering of the automobile men for the fall season. John L. Brock, president, presided. William Johnston, the only aviation man associated with the organization, told of the airplane meet at Mercer Airport.

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS

CONTINENTAL MOTORS — Power of a Nation — AMERICA'S STANDARD



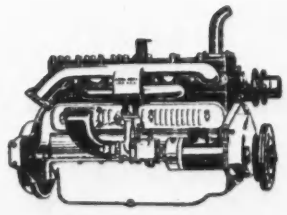
PROGRESS

Continental's long years of gasoline engine building have been marked by annual milestones of progress dictated by highly-trained engineers » » » There is no field for internal combustion motors that Continental has not and is not supplying to the universal satisfaction of both manufacturers and users » » » When Continental motors are specified the true excellence of the power plant is emphasized.

CONTINENTAL MOTORS CORPORATION

Offices: Detroit, Michigan, U. S. A.
Factories: Detroit and Muskegon

The Largest Exclusive Motor Manufacturer in the World



Continental Motors

Production--Engineering--Factory-

BALTIMORE ENGINEER DETAILS FLEET MAINTENANCE SAVINGS

Bavett, of Yellow Cab, Describes Methods and Results From Many Years' Experience; Research Has Systematized Operations; Records Carefully Kept

"CLOSER and more constant study must be devoted to technical research if fleet operators are to realize the most out of every dollar spent for maintenance," declares Joseph Bavett, superintendent of maintenance for the Yellow Cab Company of Baltimore. Mr. Bavett is secretary of the Baltimore section of the Society of Automotive Engineers.

"In the maintenance of any fleet of cars," says Mr. Bavett, "there are many factors entering into successful operation which are at times misunderstood or overlooked. Some of these factors are standardization of equipment, topographical and climatic conditions and properly heated garages. These elements are very often considered of secondary importance, but they do have a general bearing upon the cost per mile of vehicle operation which cannot be readily computed.

"Attempts are made, but upon analysis every new lot of cars purchased has certain changes which perhaps lower operating costs, but do not necessarily lower maintenance costs, in that the changes require different operations in the shops and help to load up the parts department with material not interchangeable, which tends to increase labor cost.

* * *

"SUCCESSFUL maintenance procedure is a small scale transplanting of factory production methods to a certain extent, and technical research plays a vital part in providing working standards. Comparisons of service cost per mile cannot easily be made in different cities, as every city has its own peculiar problem, which immediately points out the fact that comparisons mean little. Therefore, any study resolves itself into one on which each city must stand alone.

"The multiplicity of mechanical problems which have arisen indicate that it is impossible to eliminate all, due to the many factors affecting a car and its parts for many reasons. By a study of all these conditions we have, however, been able to record a number of incidents which may arise in any experience.

"Very often a new driver can ruin a perfectly good maintenance cost record which has been compiled on a particular car, due to carelessness. I believe that intensive educational methods are necessary to teach drivers what proper operation of a vehicle means with respect to maintenance.

"The most important item in motor maintenance is lubrication. I believe that the life of a car depends largely upon proper lubrication. The best oils are the most economical insurance for low unit cost. However, the prevention of accumulation of foreign materials hampering the lubrication must be watched in order to keep the lubricant at maximum efficiency.

* * *

"IN the poppet valve motor, exhaust valves are a source of great concern insofar as obtaining the best desired results. It is necessary to obtain maximum efficiency at all times and to endeavor to keep the motor in the same condition as received from the factory. This type of valve requires a constant check for the accumulation of carbon and its elimination from time to time. This is governed largely by the grade and type of gasoline used and fixed periods of inspection and cleaning. This period has been established in our shops for every 3,000 miles of operation. Intake valves do not require the attention found necessary in the exhaust valves. The inspection and cleaning periods are about every 20,000 miles.

"The sleeve valve requires comparatively less attention, it being necessary only to clean it at named inspection times. Maximum efficiency can be obtained with little effort in this latter type. However, the wearing of the inner sleeve impairs efficiency. A change of these parts is necessary every 50,000 to 75,000 miles. With higher viscosity oils for lubrication in these motors, carbon formation is necessarily greater.

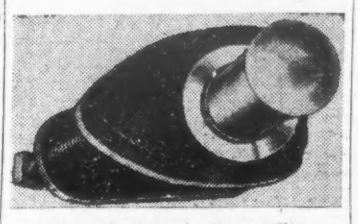
* * *

"CONSIDERING the bearings, sleeves, pistons and rings, extensive studies are carried out in our organization to determine the greatest number of miles cars can travel before adjusting bearings or replacing sleeves, pistons and rings, or the complete change of the motor on account of worn cylinder walls and crankshafts. Abrasives and other elements in the lubricants, together with high traveling speeds, are deteriorating factors which shorten the life of the various parts mentioned, and should be minimized as much as possible.

"The transmission bearings require periodic adjustments, and we have found that in keeping the lost motion to a minimum, longer life is assured. The handling of the clutch, and the shifting of gears by the various types of operators are of major importance in the life of these parts, also the live axle and differential gears. A most essential

(Continued on Page 9)

PRODUCTION STARTED ON NEW LIGHTER



Stewart-Warner Pass-a-lite

Stewart-Warner Corporation, Chicago, offers a new line of model 421 lighters, known as the Pass-a-lite, in a selection of colors. The device is mounted on the instrument panel and is held in a sleeve from which it may be removed by unscrewing.

The lighter is installed by clamping to the back of the instrument board and connecting it to the ammeter by a wire.

The manufacturers state that it has been adopted by several car manufacturers as standard equipment.

ONE PIECE CONVEYOR

The Chicago Steel Foundry, Chicago, has introduced a screw conveyor in a one-piece steel casting which is contrasted with bolted or welded conveyors of this type.

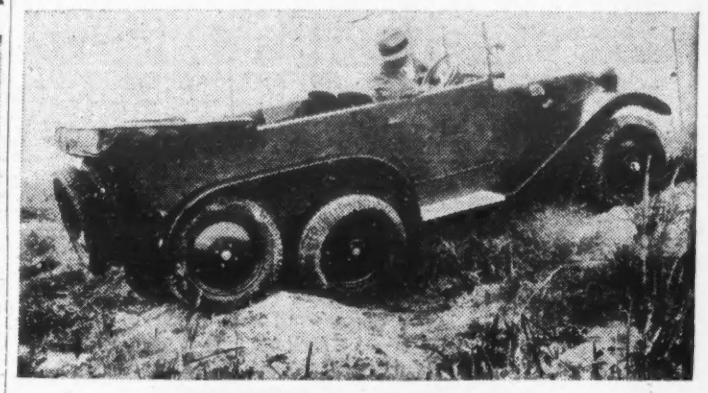
In addition to its one-piece construction, the manufacturers can furnish this equipment in a selection of steels for particular service.

SERVIS-SHEPARD OFFERS NEW LINE OF FLOOR TRUCK

The Lewis-Shepard Company, Watertown, Mass., and Crawfordsville, Ind., has issued a catalogue announcing its new line of standard and special floor-trucks.

Wherever possible arc-welded construction has been used in the manufacture of these trucks.

The Tatra-Car Is Unorthodox



THE TATRA-CAR in rough terrain

Twelve speeds forward, no frame, five axles and four driving wheels, are just a few unorthodox features of the Tatra-Car, an automobile built in Czecho-Slovakia of such unusual interest that one was purchased for experimental use by the Thompson Products Corporation, Cleveland.

The Tatra-Car was originally made for the use of German army officers in crossing shell torn ground. Its four driving wheels are designed to contact at all times with the most irregular contours, providing great traction. The twelve gear changes offer a wide range of power, but a maximum speed of only twenty-eight miles an hour.

A horizontal, four-cylinder, double opposed air-cooled engine supplies the power for the Tatra-Car. It is built on a nine-inch tube which carries the propellor shaft. In line are the transmission, and two differentials, one diferential for each set of driving wheels. Each driving wheel has its own individual axle, connected to the differential by a universal joint. The axle housings work on ball joints.

Two gear shift levers allow selection of the three different ratios of the differentials, and another operates the transmission. Otherwise the car is driven like standard American makes.

Thompson engineers are especially interested in the fact that nearly all the car's weight is sprung. Trend of American automobile design during recent years has been towards reducing unsprung weight.

WISCONSIN PETROLEUM ASSOCIATION TO MEET

Madison, Wis., Oct. 20.—The Wisconsin Petroleum Association will meet at the Loraine Hotel, here, October 22. With every oil man in the state interested in keeping the gasoline levy down to 2 cents, the gas tax is expected to be the main topic of discussion.

Bills which the oil men may expect the Legislature to consider this coming session will be reported on by William Aberg, attorney for the association. Elmer H. Pedley, Kenosha, secretary of the association, will outline plans for a membership drive to be conducted during the next few months.

The marketing code committee of the association will also meet at this time. Additional members of this committee appointed since the last meeting include Bert Rentmeester, Oconomowoc Oil Company, Oconomowoc; William McMillan, Lindsay-McMillan Oil Company, Milwaukee, and Frank Sheehan, Winona Oil Company, Winona, Minn.

CUMULATIVE NEW PASSENGER CAR

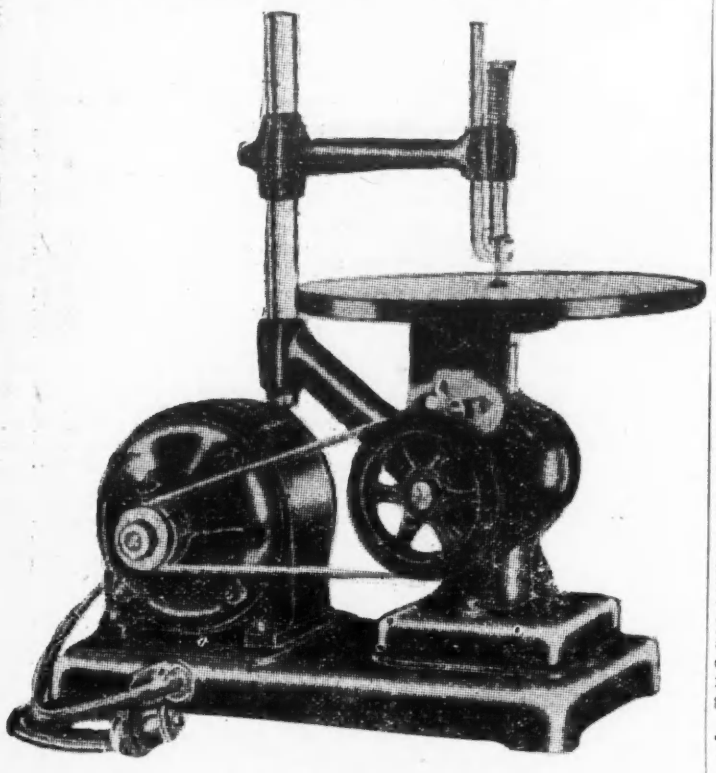
Returns for today: New Hampshire, North

States	Auburn	Austin	Buick	Cadillac	Chevrolet	Chrysler	Cord	DeSoto	Dodge	Durant	Essex	Ford	Franklin	Gardner	Graham	Hudson	Hupmobile	Jordan	La Salle	Lincoln
Arkansas	1		27	2	324	25		8	21	12	10	429			7	1	2		5	1
Delaware		3	75	9	96	18		4		7	11	195	1		1	8	3		4	3
Florida	6	30	110	7	642	53	2	11	19	9	46	847	4		38	22	8		3	6
Illinois	43	35	783	107	2167	310	12	158	206	31	176	3688	60	5	132	110	78		110	30
Maryland	2	2	182	13	731	49	1	17	22	12	41	867	15		30	23	21	1	8	4
Montana	3	1	41	3	136	17	1	7	9	5	19	159	4		4	8	4		2	
N. Hamp.	4	5	91	4	178	27		16	18	9	21	321	4		9	7	10		1	2
N. Ca'lina	2	4	120	10	667	72		12	28	7	28	1193	6		10	22	4		3	2
N. Dakota		4	64		354	16	1	7	11	14	23	438	1		10	7	2		1	
S. Ca'lina	1	9	49	3	390	13		13	18	1	9	622			1	10	3		1	2
S. Dakota	1	3	50	1	418	24		3	39	17	19	487	3		9	5	10			2
Utah	9	2	58	6	209	8	3	13	19	19	23	320	4		19	6	4		3	1
W. Va.	7	1	78	5	444	51		15	49	13	35	723	9		21	16	13		6	4
Wisconsin	14	10	362	15	1103	119	2	58	64	24	89	1504	9	1	46	72	22		13	4
D. of Col.	5	6	109	22	283	28		10	16	10	23	680	3		24	13	19	1	11	5
Total	98	115	2199	207	8142	830	22	352	539	190	573	12473	123	6	361	330	203	2	171	66
Ark., '29	1		55	2	541	36		18	45	8	24	1071	1		24	8	8		3	1
Dela., '29	3		71	4	138	12	1	2	4	17	18	234	2		1	7	15		12	2
Florida, '29	2		99	5	696	56	1	27	46	5	76	1344	11		49	33	23	1	8	
Ill., '29	106		1416	115	3230	580		322	519	135	614	6261	58	12	373	333	394	10	192	49
Md., '29	5		235	13	827	95	2	40	58	25	152	1182	16		53	56	67	1	18	6
Mont., '29	9		86		345	45	1	28	49	24	51	547	10		20	23	15		6	
N. H., '29	9		97	1	205	24		35	21	22	58	368	12		31	15	11			1
N. C., '29	3		293	9	1363	168		74	133	31	149	3062	2		49	61	18		15	5
N. D., '29	2		117		645	43		17	42	31	49	1202	1		32	24	14		1	
S. C., '29			73	1	764	40		39	33	5	39	1380	2		8	16	6		1	1
S. D., '29	2		104		732	43		13	82	56	58	1197			30	17	32		1	1
Utah, '29	21		77	8	297	19	3	36	35	60	59	617	11		30	34	27		5	1
W. Va., '29	8		167	7	651	85		43	91	33	110	1101	7		62	37	38	1	16	5
Wis., '29	14		614	18	1596	226	3	110	165	96	313	2818	9	3	167	131	97		22	11
D. of C., '29	10		156	16	277	60		9	26	9	79	688	13		45	23	37	1	12	9
Total, '29	195	*	3660	199	12307	1532	11	813	1349	557	1849	23072	155	15	974	818	802	14	312	92

*Not in production at that time.

Equipment - - Development

Illinois Die Filing Machine



SIDE VIEW of Illinois die filing machine

The Illinois die filing machine has a twelve-inch table and may be tilted fifteen degrees, in two directions from horizontal. A conveniently located scale simplifies setting the table at the desired angle. All moving parts are enclosed and run in oil.

The chuck in the lower ram is designed to grip a one-quarter-inch diameter shank. A special adapter is furnished for one-eighth-inch diameter shanks. Either files or stones may be used with or without the overarm support, but when saws or slender or extra length files are used, the overarm must be used.

The upright support for the overarm extends ten inches above the top of the table.

An adjustable saw guide fits close to the upper ram. Two slots, one for narrow and one for wide saws, are provided to support and guide the saw. This guide also serves to prevent the work from being lifted from the table by the return stroke of the saw.

Two adapters are furnished with the overarm equipment, one for use with files and the other with saws.

It is manufactured by the Illinois Tool Works, Chicago.

AERONAUTICS STUDY COMPLETED

Washington, D. C., Oct. 20.—A study just completed by the Aeronautics Branch of the Department of Commerce shows that on September 30, 1930, there were 14,425 aircraft pilots holding licenses issued by the department. It is also shown that 977 gliders, 118 glider pilots, and 8,979 mechanics had been licensed and 8,893 aircraft had been licensed or identified.

This study not only shows the number of aircraft, pilots and mechanics in each state, but also the number in foreign countries and possessions of the United States holding licenses issued by the Department of Commerce.

It is shown that New York was first on the list of licensed or identified aircraft with 1,119, but California had the largest number of pilots, mechanics, gliders and glider pilots; having 2,685 pilots, 1,663 mechanics, 187 gliders and forty-five glider pilots. This state also had 1,082 aircraft, which was the second largest number. Illinois was third in the number of aircraft, pilots and mechanics, having 585 aircraft, 831 pilots and 550 mechanics. Illinois and Ohio were tied for second place in the number of glider pilots, each having thirteen.

TO MAKE NEW BRAKE SYSTEM AT LANSING

Lansing, Mich., Oct. 20.—Manufacture of a new type of electric brake system for motor trucks and trailers will be instituted in this city.

Application has been made for patents on a mechanism that sets and releases brakes electrically. Drivers merely press a button to set the brakes on truck and trailer simultaneously. Brakes remain set until a second pressure of the button, with no electric current being burned in the interval.

Inventors of the new system are Harvey E. McLean, Andrew C. Williams, and Ira B. McLean, all of this city.

Baltimore Engineer Details Fleet Maintenance Savings

(Continued from Page 8)

point is the proper adjustment of drive pinions and ring gear, and the precise meshing of these parts. When taper roller bearings are used in the drive pinions, axle shafts and front wheels, attention must be paid to exacting adjustments if maximum efficiency is desired.

* * *

"THE development of shock insulators has eliminated the problem of lubricating spring shackles and of the excess wear of spring bolts and bushings. Where brake drums are attached to the hub and are changed as a unit, a great amount of time is saved if the drums are turned down, and the chances of possible misalignment are lessened considerably. In comparison with the general prescribed methods, brake bands relined in the shops are on hand to be installed on immediate notice.

"A general inspection has been found necessary every 3,000 miles over our entire fleet of more than 200 vehicles. The inspection department is headed by a chief inspector who reports directly to the superintendent, and is held responsible for the necessary checking required. This division is equipped with pits so constructed as to allow work on any car to be accomplished under and over at the same time. The cars are tested before they are put over the pits and then inspected thoroughly, the inspector recording in detail the repairs and adjustments deemed necessary. A separate record is placed on each car so that the various mechanics know exactly what to do, thus relieving them of any judgment they might entertain as to what additional work should be done.

* * *

"SHOULD the motor, transmission, differential, front axle, steering post, brakes, radiator, springs, universal joints or wheels, be found in bad condition, repairs are not executed at the moment, but replacements are made of the entire units. The worn units are sent to the overhauling department for complete rebuilding.

"This department is required to have available at all times a complete stock of assembled units taken from other cars which have been reconditioned, so that getting the car ready for street operation at the soonest possible time merely hinges on the replacement of the assembled unit. Many thousands of dollars have been saved by methods of this kind, both in shop operating costs and in additional time in getting the cars on the streets. All such worn units taken from cars are tagged with full information as to date of replacement and car numbers from which they were removed.

* * *

"LABOR is the primary and most important factor in either production or maintenance. Our entire personnel is composed of specialized mechanics only. Operations are speeded up by the addition of service equipment and time-saving devices of the most modern manufacture. Machine tools are arranged so that straight line movements of the materials and finished parts can be accomplished.

"Worn and damaged parts from the various units are removed and accumulated, where they are assorted every two weeks. Parts that are beyond repair are placed on the scrap pile; repairable parts are sent to their respective machines for reconditioning in order to produce low unit cost per part. Our machine shop is always busy reconditioning parts which would normally have been scrapped.

"The system used to accomplish the results desired provides a method for analysis of the three major factors of cost. First is labor, second is material (covering the general wear and tear due to operation) and, thirdly, accidents, calculated to the cost per mile of cars in service.

"Accidents produce an unstabilized condition in shop planning and operation, but a condition which will be ever present in fleet maintenance.

"Accident jobs require special attention, for the various reasons for such accidents must be explained by all concerned before reconditioning starts. Photographs of the damaged cars are taken at the time of accidents, if possible, so that causes and effects in general will be made easier for investigations.

* * *

"CLOSE supervision of the operation of all cars is facilitated by means of a complete system for maintenance records of cost and performance. A job card system is used to furnish the necessary information. White cards are used for general repairs and red cards for accidents. Material requisitions are issued for each job, and, when combined, form authority of the foreman for the procedure of the work required. From the cards and requisitions the monthly costs are compiled for each car in service. Special attention is given to parts having short life, and reasons for these faults are determined. Manufacturers of replacements parts are informed from time to time as to the various findings and adjustments are made accordingly.

"Where purchasing is accomplished in large scale quantities, prices are considerably lower. Naturally, these are obtained direct from manufacturers. Special items are often obtained from the most advantageous sources. However, as time goes on, the manufacturers will gradually supply all special items, which will materially affect the unit cost. The efficiency of large scale servicing methods has definitely reduced the cost of maintenance."

REGISTRATION STATISTICS, SEPTEMBER, 1930

Carolina, South Dakota and District of Columbia

States	Marmon	Nash	Oakland	Oldsmobile	Packard	Peerless	Pierce-Arrow	Plymouth	Pontiac	Reo	Studebaker	Stutz	Viking	Whippet	Willys	Willys-Knight	Windsor	Miscellaneous	Totals
Arkansas	1	16	3	4	1			38	13	3	8		2	4	2	1			971
Delaware	2	4	8	3	9			14	15		7			3	5	1		1	510
Florida	13	24	21	15	15		2	63	56	6	11		3	13	6	2			2,113
Illinois	60	228	85	186	201	8	42	331	356	46	401	12	18	40	114	60	5	12	10,446
Maryland	7	53	13	30	19	2	7	81	99	21	52			11	17	7	3	1	2,464
Montana	2	10	6	3	1		1	18	12	2	12			3	7	4			504
N. Hamp.	14	41	8	22	15	1	2	41	29	9	30		1	4	15	5			964
N. Ca'lina		25	4	14	6		4	72	52	3	18		1	13	9	5			2,416
N. Dakota	7	25	8	8	1			45	43	4	24		2	27	35	4			1,186
S. Ca'lina		10	9	5	5			29	17	5	11			1					1,237
S. Dakota	6	17	9	49	4			61	31	4	28		3	11	19	3			1,336
Utah	1	27	7	6	7		1	13	26	7	22		2	5	5				855
W. Va.	12	28	23	26	13		1	95	90	23	30	1		25	53	12			1,922
Wisconsin	22	184	68	83	26	2	12	217	225	21	184		10	47	109	15		1	4,757
D. of Col.	12	16	24	30	32	16	6	49	57	6	47		4	7	10	7		5	1,596
Total	159	708	296	484	355	29	78	1167	1121	160	885	13	46	214	406	126	8	20	33,277
Ark., '29	1	21	3	9	6		3	69	50	2	21		2	54		4		4	2,095
Dela., '29	1	22	7	9	17		2	16	28		8			18		9			680
Florida, '29	7	29	11	26	19		1	30	64	10	18		3	58		6		6	2,770
Ill., '29	131	450	188	503	445	51	38	508	805	94	513	34	51	457		132	16	72	19,207
Md., '29	12	77	26	77	53	6	12	77	161	16	62	2	3	68		18		1	3,522
Mont., '29	13	47	9	21			2	68	51	3	32		3	59		17		2	1,586
N. H., '29	17	50	15	32	18			35	42	9	45		2	49		16			1,240
N. C., '29	25	71	30	70	23	1	1	139	159	2	47	1	5	123		12		1	6,145
N. D., '29	31	71	25	32	4			89	85	1	41		2	117		20		1	2,739
S. C., '29	21	13	13	20	11			46	63	4	14		4	20		2			2,639
S. D., '29	10	34	10	79	6	1		108	80	4	51		9	152		12		2	2,926
Utah, '29	7	58	11	40	17			10	24	5	23	2	2	23		5			1,567
W. Va., '29	33	66	14	56	19	3	4	67	94	7	56	6	3	108		18		1	3,017
Wis., '29	44	219	81	202	55	18	18	276	405	23	230	4	13	304		55		18	8,378
D. of C., '29	15	32	9	68	69	22	6	27	72	2	44	1	3	19		11	1	22	1,893
Total, '29	368	1260	452	1244	762	102	87	1565	2183	182	1205	50	105	1629		337	17	130	60,404

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS

MERCHANDISING ACCESSORIES EQUIPMENT

WHOLESALE

DISTRIBUTION SHOP EQUIPMENT REPLACEMENTS

MASSILLON, O., JOBBERS NOTE STEADY REPLACEMENTS GAIN

Dull Summer Followed by Substantial Demand as Car Owners Prepare for Winter; Pick-Up in Operations of Steel Mills Brightens Future

MASSILLON, O., Oct. 20.—After weeks of apathy in automotive replacement parts business, jobbers servicing the Massillon area report that trade has been picking up steadily since October 1. Inactivity is believed due to the slowing up of major steel plan operations, which have been at a new low here for six months.

Brighter prospects are reported with announcement that the leading steel mills in the Massillon area, will start increased operations soon, which will result in absorbing the greater portion of the large army of unemployed.

At the Dine-Dewees Company, largest exclusive replacement parts jobbers here, it was reported this week that since the first of the month there has been a noticeable gain in many outstanding replacement parts, the volume of this business coming from the larger repair garages, which is an indication that owners are beginning to give needed attention to their cars.

It was said at the Dine-Dewees Company that, while September showed somewhat of a gain over August, the month of October will come nearer to being a normal month for this season of the year. There also has been some improvement in shop equipment demand, it was said at the local jobbing houses.

Outstanding in demand the past two weeks has been reboring requirements, pistons, rings, bearings and gears. Also there has been a decided improvement in demand for brake lining. Check up disclosed that garages are having calls now for brake service in preparation for the coming winter months. For probably three months there has been little call for brake lining.

Representatives of the Dine-Dewees Company, traveling the immediate Massillon territory, which embraces a score or more villages, report there is a big improvement in repair work in the small towns and that garage men are busier now than in many weeks.

Within another month jobbers here anticipate a greater demand for brake lining, owing to the fact that many contractors will pull most of their trucks from construction jobs and put them in garages for brake and engine overhauling.

Quickening of demand in recent weeks has been noticed in winter requirements, such as windshield wipers, anti-freeze preparations, heaters, radiator covers and chains, dealers reporting that garages are stocking heavier this fall than last in most of these accessories.

Outlook is better now in replacement parts than it has been in many weeks, and garage owners as well as automotive supply houses predict that business volume will continue to mount with the advance of the fall and winter season.

Collections show slight improvement over recent months, but the jobbers explained that had been expected and they were well prepared for such a situation as existed throughout the summer. They feel they have weathered what they termed the "worst period."

There has been a fair business locally in small tools for some weeks. The trade in heavy shop equipment is looking up after a very slow summer and inquiries from garage men would indicate that this line will show decided improvement before the end of November.

REEL AIR-SERV NEW GAUGE ANNOUNCED BY AMERICAN OIL PUMP

Cincinnati, O., Oct. 20.—Offered as a "step forward" in automatic air service, the American Oil Pump and Tank Company is marketing the American Reel Air-Serv, which the company claims assures speed, accuracy and dependability.

This new gauge is calibrated to 130 pounds, which, it is pointed out, is a convenience long sought by bus drivers requiring high pressure measurement for big tires.

As shown above the reel housing is of heavy steel stampings, sturdy and weatherproof. The sides are easily removable. All mechanism is rigidly supported by cast iron framework. The reel rewinds by spring action. Life of the hose is increased by automatic winding on the hub in true coils without pinching or kinking.

To prevent rewinding too rapidly, two governors are attached to the reel spokes. The hose is carried on four guide rollers. The gauge is encased in hard rubber and is an integral part of the gun equipped with valve trigger.

Kansans Visit Bosch Plant

LYLE WHITLOCK of the Whitlock Company, automotive wholesaler of Wichita, Kan., accompanied by Earl Prange of that city, recently came east to Springfield, Mass., to inspect the plant of the American Bosch Magneto Corporation. The photograph above was taken outside the Bosch plant. Left to right, are: Mr. Prange, James E. Redman, Bosch general sales manager of the automotive division; R. W. Washburn, secretary of the corporation; Roy Davey, general advertising manager; Herbert E. Penner, general service manager, and Mr. Whitlock. Whitlock and Prange report their trip in a La Salle car was made much more pleasant through installation of a Bosch motor car radio receiver

GASOLINE WAR BEGUN IN DALLAS BECOMING STATE-WIDE IN TEXAS

Dallas, Tex., Oct. 20.—What started as a small argument between local independent service station operators and wholesale distributors of gasoline, promises to become statewide in its scope and far-reaching in effect.

Not only have gasoline dealers of this city become thoroughly aroused, but independent dealers from other communities are taking an interest in the proceedings and dealers in Houston have taken active steps to reach some new understanding with wholesalers operating in that city.

Approached with a request for better prices and conditions in relations between the wholesalers and independent retailers, the wholesalers of this city responded with a cut of 2 cents in the price per gallon through their company-owned stations, without passing this on to the independents.

PLAN PARTS DEPOT AT BAYWAY TERMINAL

Elizabeth, N. J., Oct. 20.—The Bayway Terminal here, formerly the Durant plant, will be used in part as an eastern distribution point for automotive replacement parts, according to plans now under way, C. L. Allen, general manager, said today.

A comprehensive plan has been put before the 6,700 jobbers, distributors, dealers and fleet owners in the metropolitan area, pointing out the economic and efficient principle of distribution from such a central point. Mr. Allen says that the idea would not in any way affect the sales policy of the various manufacturers, jobbers, etc.

"X" FLUSH ON MARKET FOR CLEANING RADIATORS

New York, Oct. 20.—Announcement is made by "X" Laboratories of a new item for service departments and stations, "X" flush, for cleaning, and automobile cooling systems.

Wholesale Brevities

Indianapolis, Ind., Oct. 20.—One hundred wholesale distributors are here attending a three-day convention, ending Wednesday, in celebration of the best year in the history of the Bowes Seal-Fast Corporation, manufacturer of tire repair materials and car owners' repair kits. Foster D. Snell, of Brooklyn, secretary of the American Society of Chemical Engineers, was among the speakers.

Omaha, Neb., Oct. 20.—O. Fred Glass announces plans to establish national distribution headquarters here for an automatic gasoline dispensing pump upon which he has obtained a patent. The concern will be known as the Town Pump Company, and it has already filed articles of incorporation with the Nebraska secretary of state. Mr. Glass will be secretary-treasury and general distribution manager. E. C. Chitwood is backing the concern.

Dallas, Tex., Oct. 20 (UTPS).—F. R. Eggel has organized the Eggel Company at Dallas and is representing factory representatives in four states—Texas, Oklahoma, Louisiana and Arkansas. Mr. Eggel was for some time sales manager and buyer for the automotive department of the Herrick Hardware Company at Waco. He concentrates on accessories, parts and supplies. The new firm is located at 2405 South Ervay St.

ERIE METER ANNOUNCES TWO NEW GASOLINE PUMPS

Erie, Pa., Oct. 20.—Two new gasoline pumps are announced by the Erie Meter Systems, Inc., the "Master" and the "Cadet." Its new line of pumps offers all-steel cabinets, conduit wiring, interlocking hose-hanger and switch, bell-ringing meters, price-computing dials, separate light switch and guarded lever nozzles.

Editor's Column

THE service station or garage owner that hands over only what the car owner requests is not the one who will succeed in business no matter whether times are good or bad. This recalls the slogan used on this page many times: "Ask 'Em to Buy!"

And now comes the Simplex News with plenty of real suggestions which jobbers should study and pass along to the trade.

"Every one who has ever driven or ridden in a car on zero days or nights has done plenty of cussing at the attendant inconveniences. Maybe it has been a weak battery that refused to turn the motor. Perhaps, the spark was insufficient to explode the gas as the starter growled. Ask this car owner if he has ever cussed at these kinds of troubles. Recall to his mind the picture of the stalled cars last winter. By doing this you will lay a foundation for your sales talk. Now it will be comparatively easy to sell him further inspection and repairs.

"After a summer's driving the radiator hose is generally pretty limp. Better replace it for him. The water pump should be inspected and probably repacked. The fan belt may be worn out or slipping, due to the grease it has absorbed and therefore should be replaced. Certainly it will have stretched and will need adjustment.

"From repairs, let's go a moment now to equipment. Is his car equipped with a thermostat and a heat indicator? If so, these should be inspected, checked and adjusted or repaired. If not, here's a chance to sell him while discussing the radiator and cooling system.

"So much for the cooling system. The colder the weather, the fatter the spark needed for easy starting. It is essential that all parts of the ignition system be in the best possible order to furnish this fat spark. Cables and wiring should be inspected and replaced where necessary. A new set of sparks will probably add much in the way of increased power and pep and easier starting. You've seen cases where the installation of a new set of plugs, together with wiring and cables, has increased a motor's efficiency as much as 30 or 40 per cent., thus, in a short space of time, saving the cost in decreased operation through the resultant saving in gasoline consumption.

"Batteries have the habit of failing in the most inopportune moments in the coldest weather. They ordinarily last from eighteen months to two years, which in driving will be somewhere between 15,000 and 25,000 miles. You will be doing the car owner a big favor if you will test his battery, and, if there is a bad cell, either repairing it or selling him a new one. Then the generator should be stepped up in order to take care of the additional strains put upon it in cold weather. As a last step in the electrical system, check while he is there, the lamp bulbs. Replace those that are deficient and sell him a complete set of additional ones for him to carry in his car.

"Walk around to the back of the car. Remind him that the lubricants in his transmission and rear axles should be changed to one of a lighter grade. This is the introductory step into the running gear. How's the brakes? Tell him that you will gladly test them. Of course, they probably will need an adjustment and perhaps more. Maybe you'll sell a brake relining job. Brakes bring up the matter of wheels and a wheel alignment can be sold. Now suggest an inspection of the steering gear and chassis. His safety depends on his running gear. Why shouldn't he be willing to have it completely checked and in good working order? Well, he is—so sell him."

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS

STOP SQUEAKS AT A PROFIT
WITH JEAVONS
SPRING COVERS

No rust accumulation, no squeaky or hard riding autos motorists when they use Fabric Spring Covers. Made of one piece SPECIAL heavy double coated imitation leather conforming to shape of spring. They cover the saving clip and therefore protect the spring's oils. Ask your jobber or write us.

The Jeavons Company, Fremont, Ohio. *Oldest Mfrs. of Spring Covers*

Reuter Heads Oakland

You're late with that, boy. It happened *LAST* week. Its news value is gone because whatever value it had was acted upon *LAST* week.

Whatever news of importance happened *LAST* week in the automotive industry was told to readers of Automotive Daily News *LAST* week, and it cost them only 25 cents for the week's service.

Chevrolet buys Martin - Parry Corp. Reuter heads Oakland Motors. September registrations of passenger cars from five states. Austin raises prices, and hundreds of other news items were delivered to subscribers on the date of publication of Automotive Daily News.

***ALL* happened LAST week and *ALL* recorded last week in Automotive Daily News. No other automotive paper COULD have delivered those important news events to readers sooner than Automotive Daily News. Only a daily can print news by the day.**

Such service commands a subscription price of $12 per year, and a reader interest almost in proportion to its price, compared with ordinary news mediums. TODAY: Check Automotive Daily News against any paper you find and note the superior service we render

***BUT*, when you add to that reader-interest the fact that *ALL* advertising copy is visible---yes, even 100 lines---you get a combination that means results ---at low cost. You should advertise in a paper like that.**

M. E. A.—N. S. P. A.
DUAL SHOW ISSUES

November 13th, 14th, 15th, 17th, 18th

Every jobber in the country, whether he attends the meeting or not, will receive these valuable numbers.

Big distribution at the Cleveland Show and Convention. No extra charge for selected distribution.

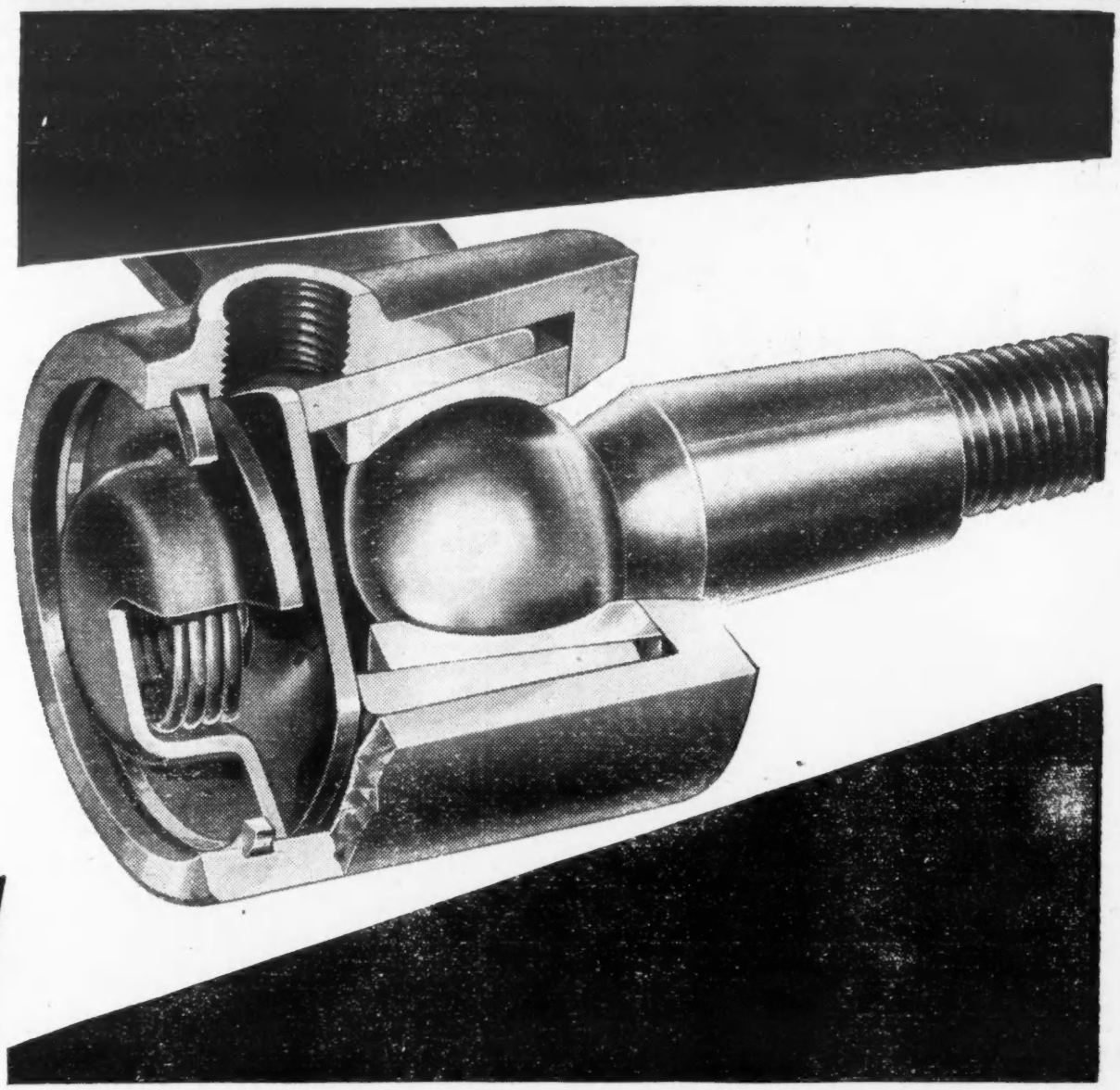
Automotive Daily News

H. A. TARANTOUS, Bus. Mgr. GRAYBAR BUILDING, NEW YORK CITY

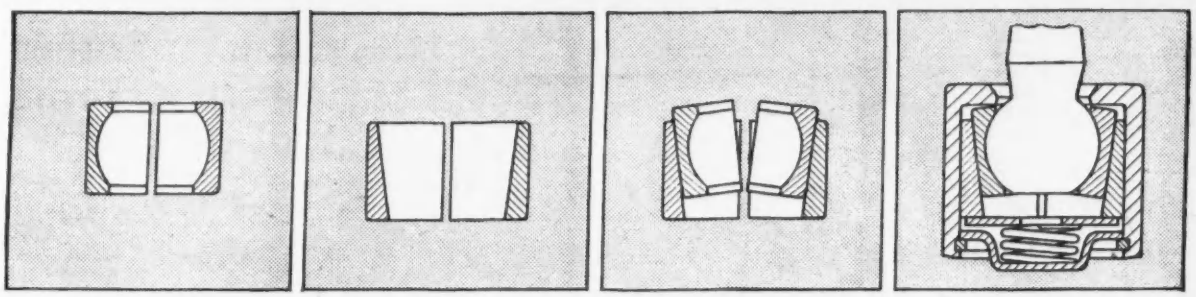
WESTERN OFFICE
Willard R. Cotton, Mgr.
333 No. Michigan Ave.
Chicago, Ill.

DETROIT OFFICE
Geo. M. Slocum, Mgr.
Fisher Building
Detroit, Mich.

EASTERN OFFICE
J. Edward Schipper, Mgr.
Graybar Building
New York City



NEW

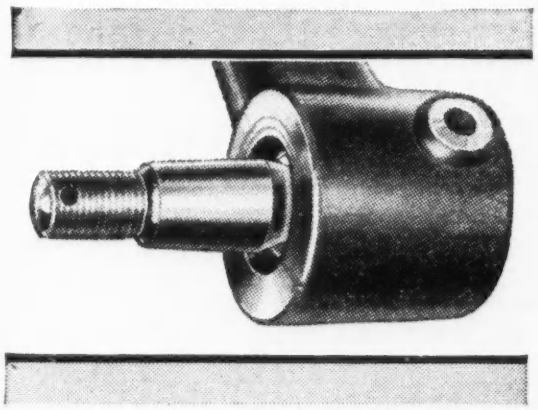


BALL SEATS: Hardened—cover 90% of the ball—never change position in relation to the ball. Seats are cylindrical, not tapered, and are interchangeable.

WEDGES: Hardened—circular—straight on the outside—tapered on the inside. Outside diameter to fit bore of the socket—are interchangeable.

SEATS AND WEDGES ASSEMBLED: The cylindrical ball seats are tilted and fit the taper of the inside of the wedges.

SOCKET ASSEMBLY: Complete assembly shows simplicity, compactness, automatic take-up, scientific soundness and absolute dependability.



This new AUTOCENTRIC Tie Rod is automatic, assuring safety and absolute quietness for all time.

New AUTOCENTRIC wedge construction insures the continued concentric position of the ball in the assembly.

The wedge-shaped hardened sleeves automatically adjust themselves, taking up all wear on bearings and ball.

Bearings cover 90% of the surface of the ball, thereby eliminating uneven wear.

AUTOCENTRIC is positive and dependable.

Lubrication is lasting and steering made easy.

Shimmy cannot develop through wear.

Investigate—Get prices—'Phone or wire us.

the Columbus AUTOCENTRIC Tie Rod

. . . *Automatic and Concentric*

COLUMBUS

AUTO PARTS COMPANY

COLUMBUS, OHIO

Division of The Electric Auto-Lite Company